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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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OM protein - protein search, using sw model

January 25, 2005, 21:14:59 ; Search time 170.563 Seconds (without alignments) 4233.600 Million cell updates/sec Run on:

US-09-806-703A-4 6812

1 MELAALCRWGLLIALLPPGA.....TFKGTPTAENPEYLGLDVPV 1255 Title:
Perfect score:
Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Scoring table:

1825181 Total number of hits satisfying chosen parameters:

1825181 seqs, 575374646 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

UniProt_02:*
1: uniprot_sprot:*
2: uniprot_trembl:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

ion	homo sapien	canis famil	rattus norv rattus norv	Aah61863 rattus no	rattus norv	mesocricetu	mus musculu	mus muscu	m mus muscu	mus musculu	rattus norv	homo sapien	Aas83109 homo sapi	sus scrofa	mus musculu	mus musculu	homo sapien	rattus norv	Aaq77349 rattus no	rattus norv	Aaq77348 rattus no	brachydanio	rattus norv	brachydanio	Aaq91602 brachydan	Oskjv8 xiphophorus	Aap55673 xiphophor	Q9yh40 xiphophorus	gallus gall	xiphophorus
Description			Q8K319 1 O6D732 1	Aah61863	P06494 I	Q60553 m	Oezbeo m	Bac98297	-				Aas83109		-	09ep98 m		Q6ua28 r	Aaq77349	Q6ua29 r	Aaq77348			Q6vga3 b	Aaq91602	x 8v[x90	Aap55673	Q9yh40 x	Q9w6f6 g	
ΠD	ERB2 HUMAN	018735	Q8K3F9 06P732	AAH61863	ERB2 RAT	ERB2_MESAU	OEZPE0	BAC98297	Q8C0E7	Q80Y89	090X70	EGFR_HUMAN	AAS83109	Q8MIL8	EGFR_MOUSE	Q9EP98	ERB4_HUMAN	Q6UA28	AAQ77349	Q6UA29	AAQ77348		ERB4_RAT	Q6VQA3	AAQ91602	Q6XJV8	AAP55673	Q9YH40	Q9W6F6	XMRK_XIPMA
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% Query Match	6.66	NO	88.0	88.0	88.0	87.9	87.7	87.7	61.8	47.8	46.6	46.5	46.5	46.3	46.2	46.1	44.1	44.1	44.1	44.0	44.0	43.9	43.8	43.7	43.7	42.3	42.3	40.4	40.1	39.9
Score	6806	6295	5994.5	5994.5	5994	5984.5	5973.5	5973.5	4207	3255.5	3171	3166	3166	3153.5	3145	3142	3003.5	3001	3001	2999	2999	2988.5	2984	2979.5	2979.5	2879.5	2879.5	2751	2729.5	2717.5
Result No.	-10	7	J 44	S	9	7	œ	o,	10	11	12	13	14	.15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	30	31

P21860 homo sapien Q62799 rattus norv P79754 fugu rubrip Q8aw81 brachydanio Q7ppn5 anopheles g Q7phn6 anopheles g	
ERB3_HUMAN ERB3_RAT P79754 QBAW81 Q7PPUG Q9PHUG	Q6ZMM4 BAD18701 Q8MLW0 Q6SAI6 AAR85155 AAR85225
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ALIGNMENTS

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ATP (By similarity).
By similarity.
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Phosphotyrosine (by autocatalysis)
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/FTId=VAR_004077.
I -> V (in allele B
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EMBL; M1167; AAA35808.1; JOINED.

EMBL; M11767; AAA35808.1; JOINED.

EMBL; M11767; AAA35808.1; JOINED.

EMBL; M11765; AAA35808.1; JOINED.

EMBL; M11765; AAA35808.1; JOINED.

EMBL; M11765; AAA35808.1; JOINED.

EMBL; M1170; AAA35808.1; JOINED.

EMBL; M1170; AAA35808.1; JOINED.

EMBL; M1170; AAA35808.1; JOINED.

EMBL; M1170; AAA35978.1; -.

EMBL; M1170; AAA35978.1; -.

EMBL; M20051; AAO18082.1; -.

EMBL; M20051; AAO18082.1; -.

EMBL; X03363; CAA27600.1; -.

EMBL; AC2081; AAO18082.1; -.

EMBL; AC2081; AAO18082.1; -.

EMBL; AC3081; AAO18082.1; -.

EMBL; AC3081; AAO18082.1; -.

EMBL; AC3081; AAO18082.1; -.

EMBL; AC3081; AAO18092.1; -.

EMBL; AC3081; AAO18092.1; AAO18092.1; AAO18082.1; AAO18082
Genomics 15:426-429(1993).

-!- FUNCTION: Essential component of a neuregulin-receptor complex, althought neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Not activated by EGF, TGF-alpha and amphiregulin.

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein tyrosine phosphate.

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein tyrosine phosphate with each of the other ERBB receptors (Potential). Interacts with PRKCABP (By similarity).

-!- SUBUNIT: Heterodimer with each of the other ERBB receptors (Potential). Interacts with PRKCABP (By similarity).

-!- SUBCELIULAR LOCATION: Type I membrane protein.

-!- PTM: Ligand-binding increases phosphorylation on tyrosine residues (By similarity).

-!- PCLYMORPHISM: There are fours alleles due to the variations in positions 654 and 655. Allele BI (Ile-654/Ile-655) has a frequency of 0.206; allele B3 (Val-654/Val-655) has a frequency of 0.102.
                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Receptor protein-tyrosine kinase erbB-2.
Extracellular (Potential).
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Pfam; PFOLOGO; Recep. Gomain; 2.

Pfam; PFOLOGO; TYRKINASE.

R PRINTS; PROGOOO1; PTOC. Kinase; 1.

R MART; SMO0261; FU; 3.

R SMART; SMO019; TYRK: 1.

R PROSITE; PSO0107; PROTEIN KINASE ATP; 1.

R PROSITE; PSO0109; PROTEIN KINASE DOW; 1.

R PROSITE; PSO0109; PROTEIN KINASE DOW; 1.

R PROSITE; PSO0109; PROTEIN KINASE DOW; 1.

PROSITE; PSO0109; PROTEIN KINASE COW; 1.

W Phosphorylation; Polymorphism; Receptor; Signal; Transferase; Transmembrane; Tyrosine-protein kinase.

T SIGNAL 1 POWAIN 22 12 125 Extracellular (Potential).
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1140
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                                                                                                                      1081 AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRXSEDPTVPLPSETDGYVAPLTCSPQPEYV
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                                     EEYLVPQQGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEG
                                                       BEYLVPOOGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEEBAPRSPLAPSEG
                                                                                                                                                                   NOPDVRPOPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPBYLTPQ
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History Profectory (2000)

History 
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Canis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yokota H.;
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
EMBL, AB008451; BAA23127.1; --
HSSP; P04626; 1N8Z.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Canis familiaris (Dog).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata,
Mammalia, Butheria, Carnivora, Fissipedia, Canidae,
NCBI_TaxID=9615,
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Last sequence update)
Last annotation update)
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01-JAN-1998 (TrEMBLrel. 05,
01-MAR-2004 (TrEMBLrel. 26,
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Pred. No. 0;
1; Mismatches
                                              99.9%;
                                                             Best Local Similarity 99.8
Matches 1253; Conservative
 175
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 1080 AGSDVFDGDLGMGAAKGLQSLPSQDPSPLQRYSEDPTVPLPPETDGKVAPLTCSPQPEYV 1139
                                                                                             1196 YLTPQGGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
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                                                      4 MELAAWCRWGFLLALLPPGIAGTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
                                NOPDVRPQPPSPREGPLPAARPAGATLER----AKTLSPGKNGVVKDVFAFGGAVENPE
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Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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R GO; GO:0016020; Cmembrane; IEA.

R GO; GO:0016020; F:ATP binding; IEA.

GO; GO:0016506; F:transferase activity; IEA.

GO; GO:0016740; F:transferase activity; IEA.

R GO; GO:0016740; F:transmembrane receptor protein tyrosine kin...;

R GO; GO:00169; P:protein amino acid phosphorylation; IEA.

GO; GO:00169; P:transmembrane receptor protein tyrosine kin...;

R InterPro; IPR000494; BGFR_L.

R InterPro; IPR000494; BGFR_L.

R InterPro; IPR000494; BGFR_L.

R InterPro; IPR000499; Ruin, repeat.

R InterPro; IPR001909; Kinase.

InterPro; IPR001909; Kinase.

InterPro; IPR001909; Kinase.

InterPro; IPR001945; Tyr_Dkinase.

R InterPro; IPR001919; Pruin-like; I.

Pfam; PF00175; Furin-like; I.

Pfam; PF00175; Furin-like; I.

R Pfam; PF00175; Varin-like; I.
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SMART; SM00219; TYKC; 1.

PROSITE; PS00018; EF HAND; UNKNOWN 1.

PROSITE; PS00011; PROTEIN KINASE ATP; 1.

PROSITE; PS00109; PROTEIN KINASE TYR; 1.

ATP-binding; Kinase; Transferase; Tyrosine-protein kinase.

SEQUENCE 1259 AA; 139101 MW; B724BD5CC33AE953 CRC64;
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                                                                                                                                                                                                                                  01-077-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
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Rattus norvegicus (Rat).
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SEQUENCE FROM N.A.
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MEDINES 238825; PubMed=12477932;

MEDINES 28.D. Colling F.S., Magner L., Shenmen C.M., Schuler G.D.,

MEDINES 28.D. Colling F.S., Magner L., Shenmen C.M., Schuler G.D.,

MEDINES 
REGTASPPHPSPAFSPAFDNLYYWDQNSSEQGPPPSNFEGTPTAENPEYLGLDVPV 1259
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Bukaryota, Metacoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
NCBI_TaxID=10116;
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Strausbergy R.
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
V-erb-b2 erythroblastic leukemia viral oncogene homolog
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                      CAAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTAC
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020 ABEYLVPQQGFFCPDPAPGAGGWUHRHRSSTRSGGGDLTI	AMH61863 AMH61863 AMH61863 AMH61863 C2-MAR-2004 (TTENBLrel. 27, Last sequence update) DT 02-MAR-2004 (TTENBLrel. 27, Last sequence update) DT 02-MAR-2004 (TTENBLrel. 27, Last sequence update) DT 02-MAR-2004 (TTENBLrel. 27, Last sequence update) OC-MAR-2004 (TTENBLrel. 27, Last sequence update) OC MARR-2004 (TTENBLRel. 27, Last sequence update) NCII TAXID=10116; RN SEQUENCE FROM N.A. RA Altschul S.P. Debbers B.S. Wagner L., Shemmen C.J. RA Altschul S.F., Zeeberg B.S., Wagner L., Schaefer C.R. RA Altschul S.F., Zeeberg B.S., Wagner L., Schaefer C.R. RA Altschul S.F., Zeeberg B.S., Wagner L., Schaefer C.R. RA Altschul S.F., Zeeberg B.S., Wagner L., Schaefer C.R. RA Altschul S.F., Zeeberg B.S., Wagner L., Schaefer C.R. RA Altschul S.F., Zeeberg B.S., Wagner B.S., Loguellano N.A., Peters G.J., Abramson R.S. Loquellano N.A., Peters G.J., Abramson R.S. Morley R.W., Touchman J.W., Green B.D., Dickson R.R. RA Altschul M.M., Marta M.A., RA Altschul M.M., Marta M.A., RA Mittly M.M., Marta M.A., RA Mittly M.M., Marta M.A., RA Marta M.A., RA M. Marta M.A., RA M. Marta M.A., RA M. M. M. Sequences M., Schmutz J., Myers R.M. RA M. Marta M.A., RA M. Marta M.A., RA M. M. M. Sedur B.D., Myers R.M. RA M. M. M. M. Sellska U., Smallus D.E., Schnerc S.D., Marta M.A., RA M. M. M. M. M.A., RA M. M. M. M. M. M.A., RA M.	Db 64 ELTYVPANASLSFLQDIQEVQGYMLIAHNQVKRVPLQRLRI
Query Match Best Local Similarity 87.8%; Score 5994.5; DB 2; Length 1259; Best Local Similarity 87.8%; Pred. No. 2.2e-304; Matches 1103; Conservative 50; Mismatches 102; Indels 1; Gaps 1; MELAALCRWGLLIALLPPGAASTQVCTGTDWKLRLPASPETHLDMLRHLYQCQVVQGNL 60		
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TIGLEPSEEEAPRSPLAPSE 1079 VVKDVFAFGGAVENPEYLTP 1199 ETHLDMLRHLYQGCQVVQGNL 60 rge J.G.,
C.M., Schuler G.D.,
T.C.F., Bhat N.K.,
mg J., Hsieh F.,
G.M., Hong L.,
int T.L., Scheetz T.E.,
tint P., Prange C.,
ton R.D., Mullahy S.J.,
A., Gunaratne P.H.,
Gay L.J., Hulyk S.W.,
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terrieles A., Schein J.E., 000 full-length human TPTAENPEYLGLDVPV 1255 |||||||||||||||| |TPTAENPEYLGLDVPV 1259 ia; Euteleostomi; Jae; Murinae; Rattus. Indels 1; Gaps , Length 1259; te) homolog 2. 2 CRC64; tabases.

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MEDLINE=92155181; PubMed=1346763;

WEDLINE=92155181; PubMed=1346763;

Gullick W.J., Bottomley A.C., Lofts F.J., Doak D.G., Mulvey D.,

Meman R., Crumpton M.J., Sternberg M.J.E., Campbell I.D.;

Mowan R., Crumpton M.J., Sternberg M.J.E., Campbell I.D.;

Three dimensional structure of the transmembrane region of the proto-
oncogenic and oncogenic forms of the neu protein.";

EMBO J. 11:43-48[1922].

-!- FUNCTION: Essential component of a neuregulin-receptor complex,
althought neuregulin.

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
constitutively activated oncogenic variant forms a homodimer.

-!- SUBURIT: Heterodimer with each of the other ERBB receptors. The
constitutively activated oncogenic variant forms a homodimer.

-!- SUBCELLULAR LOCATION: Type I membrane protein.

-!- SUBCELLULAR LOCATION: Type I membrane protein.

-!- SUBCELLULAR LOCATION: Type I membrane protein.

-!- STMILARITY: Belongs to the EGF receptor family.
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   TISSUE=Neuroblastoma;
MEDLINE=86118662; PubMed=3945311;
Bargmann C.I., Hung M.-C., Weinberg R.A.;
"The neu oncogene encodes an epidermal growth factor receptor-related
                                                                                                                    01-JAN-1988 (Rel. 06, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
01-OCT-2004 (Rel. 45, Last annotation update)
Receptor protein-tyrosine kinase erbB-2 precursor (EC 2.7.1.112)
(P165erbB2) (NEU proto-oncogene) (C-erbB-2) (Epidermal growth factor receptor-related protein).
Name=Erbb2; Synonyms=Neu;
                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lai C., Lemke G.;
"An extended family of protein-tyrosine kinase genes differentially expressed in the vertebrate nervous system.";
Neuron 6:691-704(1991).
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InterPro; IPR000494; EGFR L.
InterPro; IPR006211; Furin-like.
InterPro; IPR006212; Furin_repeat.
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TISSUE-Sciatic nerve;
MEDLINE-91222560; PubMed=2025425;
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PDB; 111J; NWR; A=647-681.
PDB; 1N8Y; X-ray; C=23-631.
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                                                                                                                                                                                           CAAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTAC
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                                                          ALTLIDINRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQ
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PRINTS; PR00109; TYRKINASE.

ProDom; PD000001; Prot kinase; 1.

SMART; SM00261; FU; 4.

SMART; SM00261; FU; 4.

SMART; SM0019; TYRC; 1.

SMART; SM0019; PROTEIN KINASE ATP; 1.

PROSITE; PS00109; PROTEIN KINASE TYR; 1.

3D-structure; ATP-binding; Disease mutation; Glycoprotein;

Multigene family; Phosphorylation; Proto-oncogene; Receptor; Signal;

Transferase; Transmembrane; Tyrosine-protein kinase.

Transferase; Transmembrane; Tyrosine-protein kinase erbB-2
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Cys-rich.

Protein kinase.

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ATP (By similarity).

By similarity.

By similarity.
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N-linked (GLNAc. .) (Potential).
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6129264583011402 CRC64;
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Cytoplasmic (Potential)
Cys-rich.
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87.8%; Pred. No. 2.3e-304;
iive 50; Mismatches 101;
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InterPro; IPR019030; Grow_fac_recept.
InterPro; IPR011009; Kinase like.
InterPro; IPR001019; Prot Kinase.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR004019; Yup_motif.
Pfam; PF00757; Purin-like; 1.
Pfam; PF001030; Recep_L_domain; 2.
Pfam; PF001030; Recep_L_domain; 2.
   Grow_fac_recept.
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PQGGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
                                                     MEDLINE-94193007; PubMed=7908275;
Nakamura T., Ushijima T., Ishizaka Y., Nagao M., Arai M., Yamazaki Y.,
                                                                                                                                                                                                                                                                                                                                                             "Cloning and activation of the Syrian hamster neu proto-oncogene.", Gene 140:251-255(1994).

-!- FUNCTION: Essential component of a neuregulin-receptor complex, althought neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Not activated by EGF, TGF-alpha and amphiregulin (By similarity).

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  tyrosine phosphate.
-!- SUBUNIT: Heterodimer with each of the other ERBB receptors (Potential). Interacts with PRKCABP (By similarity).
-!- SUBCELLULAR LOCATION: Type I membrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- PTM: Ligand-binding increases phosphorylation on tyrosine residues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -1- SIMILARITY: Belongs to the EGF receptor family.
                                                                                                                                                15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 44, Last annotation update)
Receptor protein-tyrosine kinase erbB-2 precursor (p189serbB2) (NEU proto-oncogene) (C-erbB-2).
Name-ERBB2; Synonyms-NEU;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Probom; PD00001; Prot_kinase; 1.
SMART; SM0261; FU; 4.
SMART; SM0219; Tyrkc; 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR006212; Furin repeat.
InterPro; IPR009030; Grow Fac recept.
InterPro; IPR011009; Kinase like.
InterPro; IPR000719; Prot kinase.
InterPro; IPR0001245; Tyr pkinase.
InterPro; IPR008266; Tyr pkinase.
InterPro; IPR004019; Yir pkinase.
                                                                                                                                                                                                                          Mesocricetus auratus (Golden hamster).
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ProDom; PD000001; Prot_kinase; 1.
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InterPro, IPR006211; Furin-like.
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Pfam; PF02757; YLP; 2.
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HSSP; P06494; 1N8Y.
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                                                                                                                          STANDARD;
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                                                                                                                                                                                                                                                                         NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                                    Ishikawa T.;
                                                                                                                                                                                                                                                                Mesocricetus
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ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120
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                                                                                                     Receptor protein-tyrosine kinase erbB-2.
Extracellular (Potential),
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PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
ATP-binding; Disease mutaTion; Glycoprotein; Multigene family; Phosphorylation; Proto-oncogene; Receptor; Signal; Transferase; Transmembrane; Tyrosine-protein kinase.
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-> E (in oncogenic NEU).
974C3791C21F2BE1 CRC64;
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Cytoplasmic (Potential)
Cys-rich.
Cys-rich.
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ATP (By similarity)
By similarity
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87.6%; Pred. No. 7.3e-304;
live 58; Mismatches 97;
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                                                                                      Potential.
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290 CAAGCTGPKHSDCLACLHFNHSGICELHCPALITYNTDTFESMLNPEGRYTFGASCVTTC 349
                                                                                                                                                                  Charactarizers, N. Kikuno R., Ohara R., Inamoto S., Koseki H., Hiraoka S., Saga Y., Nagase T., Ohara O., Koga H.;
Saga Y., Nagase T., Ohara O., Koga H.;

"Prediction of the coding sequences of mouse homologues of KIAA gene:
III. the complete nucleotide sequences of 500 mouse KIAA-homologous
of the complete nucleotide sequences of 500 mouse KIAA-homologous
of complete nucleotide sequences of cDNA clones
of condition of from size-fractionated libraries.";

DNA Res. 10:167-180(2003).

EMBL; AK129487; BAC98297.1; -.

ROG GO:0007422; P:heart development; IMP.

GO; GO:0007422; P:heart development; IMP.

GO; GO:0007422; P:peripheral nervous system development; IMP.

InterPro; IPR006211; Furin repeat.

InterPro; IPR006212; Furin repeat.

InterPro; IPR001109; Kinase like.

InterPro; IPR001109; Kinase like.

InterPro; IPR001145; Tyr pkinase.

InterPro; IPR001245; Tyr pkinase.

InterPro; IPR001245; Tyr pkinase.

InterPro; IPR00129; Yir pkinase.

InterPro; IPR00129; Wire motif.

InterPro; IPR00129; Wire motif.
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                                                   Euteleostomi;
Murinae; Mus
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                                                   Craniata; Vertebrata; Euteleosto
Sciurognathi; Muridae; Murinae;
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87.5%; Pred. No. 2.9e-303;
ive 56; Mismatches 100;
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Pfam; PF00069; Pkinase; 1.
Pfam; PF010130; Recep L domain; 2.
Pfam; PF010130; Recep L domain; 2.
Pfam; PF001030; Pface L domain; 2.
PRINTS; PR00109; TYRKINASE.
ProDom; PD000001; Prot kinase; 1.
SWART; SW00261; PU; 4.
SWART; SW00219; TYRK; 1.
PROSITE; PS00101; PROTEIN KINASE ATP; 1.
PROSITE; PS00101; PROTEIN KINASE DOM; 1.
PROSITE; PS00101; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE DOM; 1.
                                Mus musculus (Mouse).
Eukaryota, Metazoa, Chordata,
Mammalia, Eutheria, Rodentia,
protein (Fragment)
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Matches 1099, Conservative
                                                                                                                    SEQUENCE FROM N.A.
TISSUE=Embryonic tail;
PubMed=14621295;
                                                                                  NCBI_TaxID=10090;
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                                  IQEFAGCKKIFGSLAFLPESFDGNPSSGIAPLTPEQLQVFETLEEITGYLYISAWPDSLH
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                                               TISSUE-Embryonic tail;
Okazaki N., Kikuno R., Ohara R., Inamoto S., Koseki H., Hiraoka S.,
Okazaki N., Kikuno R., Ohara O., Koga H., Hiraoka S.,
Baga Y., Nagase T., Ohara O., Koga H. Mouse Homologues of KIAA Gene
III. The Complete Nucleotide Sequences of 500 Mouse KIAA-homologous
CDNAs Identified by Screening of Terminal Sequences of cDNA Clones
DNA Res. 10:167-180(2003).
EMBL; AKI29467; BAC98297.1; -.
BENEL, AKI29467; BAC98297.1; -.
SEQÜENCE 1305 AA, 143507 MW, A51D897408521860 CRC64;
   Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Musinae; Mus
                                                                                                                                                                   Length 1305;
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87.5%; Pred. No. 2.9e-303;
iive 56; Mismatches 100;
   Chordata; C
Rodentia; S
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Best Local Similarity 87.57
Matches 1099; Conservative
   Eukaryota; Metazoa;
Mammalia; Eutheria;
MCBI_TaxID=10090;
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02-MAR-2004 (TrEMBLrel. 27, Last sequence update)
02-MAR-2004 (TrEMBLrel. 27, Last annotation update)
MKIAA3023 protein (Fragment).
MKIAA3023 Mus musculus (Mouse).
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01-MAR-2004 (TIEMBLrel. 26, Last annotation update)
Mus musculus 13 days embryo male testis CDNA, RIKEN full-length
enriched library, clone:6030449F08 product:v-erb-b2 erythroblastic
leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene
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                                                          RIVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWALBSILRRRF
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PYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDV
           PYVSRLLGICLTSTVQLVTQLMPYGCLLDHVREHRGRLGSQDLLNWCVQIAKGMSYLEEV
                                           RLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRF
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        homolog (avian), full insert sequence. (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=CS7BL/60; TISSUB=Testis;
MEDLINE=99279253; Pubbed=10349636;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                           Created)
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MEDLINE=21085660; PubMed=11217851;
RIKEN FANTOM Consortium;
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STRAIN=CS7BL/6J; TISSUE=Testis;
The FANTOM Consortium,
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SEQUENCE FROM N.A.
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SEQUENCE FROM N.A.

Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P., Adana-Stranic-Stra
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SIGNIBLE STRAIN=C57BL/6J; TISSUE=Testis;
KMEDLINE=20530913; PubMed=11076861;
KMEDLINE=20530913; PubMed=11076861;
KONDO H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
KONDO H., Akiyama M., Nishine T., Harada A.,
Amamoto R., Matsumnot B., Hazama M., Nishine T., Harada A.,
Amamoto R., Matsumnot H., Sakaguchi S., Ikegami T., Kashiwagi K.,
Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watchiki M.,
Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
RIKEN integrated sequence analysis (RISA) system 384-format
Genome Res. 10:1757-1771(2000).
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MGD; MG1095410, BEED2.

AG0; GO:0007507; P:heart development; IMP.

AG0; GO:000422; P:myelination; IMP.

AG0; GO:000422; P:myelination; IMP.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000310; GTow_Eac_recept.

R InterPro; IPR00109; Kinase_like.

R InterPro; IPR00109; Kinase_like.

R InterPro; IPR001245; Tyr_Dkinase.

R InterPro; IPR001245; Tyr_Dkinase_AS.

R InterPro; IPR001245; Tyr_Dkinase_AS.

R InterPro; IPR001245; Tyr_Dkinase_AS.

R InterPro; IPR001295; Tyr_Dkinase_AS.

R InterPro; IPR00109; Kinase; I.

R Pfam; PR01030; Recep_L domain; 1.

R Pfam; PF01030; Recep_L domain; 1.
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SMART; SM00219; TYrKc; 1.
SMOSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
ATP-binding; Kinase; Transferase; Tyrosine-protein kinase.
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MEDLINE=2049,374; PubMed=11042159; Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibat Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Inomalization and subtraction of cap-trapper-selected prepare full-length cDNA libraries for rapid discovery Genome Res. 10:1617-1630(2000).
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llarity 88.1%; Pred. No. 2.8e-211;
Conservative 40; Mismatches 65;
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ProDom; PD000001; Prot kinase; 1.
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Strausberg R.L., Feingold B.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Bottleton R.F., Jordan H., Moore T., Max S.I., Wang J., Heish F.,

Blatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Rapleton M., Soares M.B., Bonaldo M.P., Casavant T.L., Schetz T.E.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raba S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McZwan P.J., McKernan K.J., Malke J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Nilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Rachards S., Worley K.C., Hale S., Garchenko Y., Boulfard G.G.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Gaimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

Jones S.J., Marra M.A.,

Rad M.
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84.4%; Pred. No. 9.8e-162;
ive 41; Mismatches 67; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              databases
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Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.
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SEQUENCE 711 AA; 78707 MW; 682B188EB0E71318 CRC64;
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GO; GO:0007507; P:heart development; IMP.
GO; GO:004252; P:myelination; IMP.
GO; GO:0007422; P:peripheral nervous syst
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InterPro; IPR006211; Furin-like.
InterPro; IPR006212; Furin repeat.
InterPro; IPR009030; Grow Fac_recept.
Pfam; PF00757; Furin-like; I.
Pfam; PF01030; Recept. domain; 2.
SWART; SM00261; FU; 4.
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STRAIN=C57BL/6; TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                         mouse cDNA sequences."
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Best Local Similarity
Matches 588; Conserv
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                                                                                                                                                                                    675 IKRRQOKIRKYTWRRLLOETELVEPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTV
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                                                                                             KPPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLGVVFGIL
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                                                                    HTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREY
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Sciurognathi; Muridae; Murinae; Mus.
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Last annotation update)
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Mammalia; Butheria; Rodentia;
MCBI_TaxID=10090;
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01-JUN-2003 (TrEMBLrel. 24,
01-JUN-2003 (TrEMBLrel. 24,
05-JUL-2004 (TrEMBLrel. 27,
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Name=Erbb2;
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PRNYVVTDHGSCVRACGPDYYEV-EEDGVSKCKKCDGPCRKVCNGIGIGEFKDTLSINAT 354
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----YGTNKTGLRELPWRNLQBILIGAVRSNNPILCNMETIQWRDIV-QDVFLSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 LTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240 CAAGCTGPKHSDCLACLHFNHSGICELHCPALVTVNTDTFESMPNPEGRYTFGASCVTAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            182 TLIDTNRS-RACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCA-RCKGPLPTDCCHEQ
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                                                                                                                                                                                                                                                                                                                         PROSITE; PRO0261; FU; 4.

SMART; SM00261; FU; 4.

PROSITE; PS00190; CTYOCHRONE C; UNKNOWN 2.

PROSITE; PS00101; PROTEIN KINASE ATP; 1.

PROSITE; PS00101; PROTEIN KINASE DOM; 1.

PROSITE; PS00109; ROTEIN KINASE TYP; 1.

ROSITE; PS00109; ROTEIN KINASE TYP; 1.

SEQUENCE 1209 A3; 134890 MW; 96FEE7F6CC1B7773 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46.6%; Score 3171; DB 2; 50.3%; Pred. No. 4.8e-157;
                                       InterPro; IRR006212; Furin repeat.
InterPro; IRR009010; Grow fac recept.
InterPro; IRR01009; Kinase like.
InterPro; IRR010109; Kinase.
InterPro; IRR01245; Tyr Dkinase.
InterPro; IRR01245; Tyr Dkinase.
InterPro; IRR01245; Fyr Dkinase.
Pfam; PF00757; Furin-like; 1.
Pfam; PF00769; Pkinase; 1.
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                                                                                                                                                                                                                                                                                                           ProDom; PD000001; Prot_kinase; 1.
InterPro; IPR000494;
InterPro; IPR006211;
InterPro; IPR006212;
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                                            QDLSVFQNLRVIRGRILHDGAYSLTLQGLGIHSLGLRSLRELGSGLALIHRNTHLCFVNT
                                                                                                                                                                                                                                        VPWDQLFRNPHQALLHSGNRPEEACGLEGLVCNSLCARGHCWGPGPTQCVNCSQFLRGQE
                                                                                                                                                                                                                                                                                                        CVBECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVAR
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                        NIQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSL
                                                                                                                                                                                                           VPWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQE
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                                                                                                                   PDLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHT
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "A truncated, secreted form of the epidermal growth factor receptor encoded by an alternatively spliced transcript in normal rat tissue. Mol. Cell. Biol. 10:2973-2982(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GO; GO:0016020; C:membrane; IEA.
GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0005489; F:electron transport activity; IEA.
GO; GO:0005408; F:electron transport factor receptor activity; IEA.
GO; GO:0005006; F:erceptor activity; IEA.
GO; GO:0004812; F:receptor activity; IEA.
GO; GO:0004812; F:receptor activity; IEA.
GO; GO:000648; P:protein transport; IEA.
GO; GO:000468; P:protein amino acid phosphorylation; IEA.
GO; GO:0001699; P:transmembrane receptor protein tyrosine kin.
InterPro; IPR001450; 4Pe45 ferredoxin.
InterPro; IPR001451; Cytc_heme_BS.
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Guttridge K., Dawson T.L., Earp H.S.;
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
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STRAIN=Flaher; TISSUE=Liver;
MEDLINE=90258888; PubMed=2342466;
Petch L.A., Harris J., Raymond V.W., Blasband A.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
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PIR; A36325; A36325.
HSSP; Q9H2C9; 1M17.
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Submitted (NOV-1991) to
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MEDLINE=84219729; PubWed=6128312;
Ullrich A., Coussens L., Hayflick J.S., Dull T.J., Gray A., Tam A.W.,
Lee J., Yarden Y., Libermann T.A., Schlessinger J., Downward J.,
Mayes B.L.V., Whitle N., Waterfield M.D., Seeburg P.H.;
"Human epidermal growth factor receptor cDNA sequence and aberrant expression of the amplified gene in A431 epidermoid carcinoma cells.";
Nature 309:418-425(1984).
                                                             1037 SSLSANSN----SSTVACINRNGSCRVKEDAFLQRYSSDPTSVLTEDNIDDTFL----
                                         TELRKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVWAGV
                                                                                                                           GSPYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLE
                                                                                                                                                                                                            DVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRR
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
NCBI_TaxID=9606;
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Ilekis J.V., Stark B.C., Scoccia B.;
"Possible role of variant RNA transcripts in the regulation of
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SEQUENCE FROM N.A. (ISOFORM 1), AND VARIANTS GLN-98; ARG-266; LYS-521; ILE-674; GLY-962 AND PRO-988.

Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.N., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S., Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.; Parly and genomental genome project, NIBHS ESIS478, Department of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu)."; Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
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MEDLINE=84196372; PubMed=6326261;
Lin C.K., Chen W.S., Kruiger W., Stolarsky L.S., Weber W., Evans R.M., Verma I.M., Gill G.N., Roomerleid M.G.;
"Expression cloning of human BGF receptor complementary DNA: gene amplification and three related messenger RNA products in A431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE=Placenta;
MEDLINE=21100872; PubMed=11161793; DOI=10.1006/geno.2000.6341;
Reiter J.L., Threadgill D.W., Eley G.D., Strunk K.E., Danielsen A.J.,
Schehl Sinclair C., Pearsall R.S., Green P.J., Yee D., Lampland A.L.,
Balasubramaniam S., Crossley T.D., Magnuson T.R., James C.D.,
Maihle N.J.;
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                                                                                                                                                                                                                                                         "A 1.8 kb alternative transcript from the human epidermal growth factor receptor gene encodes a truncated form of the receptor."; Nucleic Acids Res. 24:4050-4056(1996).
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epidermal growth factor receptor expression in human placenta."; Mol. Reprod. Dev. 41:149-156(1995).
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growth factor receptor-like
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MEDLINE=88046483; PubMed=6093788;
Simmen F.A., Gope M.L., Schulz T.Z., Wright D.A., Carpenter G.,
O'Malley B.W.;
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MEDLINE=64245835; PubMed=6330563;
Xu Y.H., Ishii S., Clark A.J.L., Sullivan M., Wilson R.K.,
Roe B.A., Merlino G.T., Pastan I.;
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variety of RNAs overproduced in A431 carcinoma cells.";
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Submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases.
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Ilekis J.V., Gariti J., Niederberger
"Expression of a truncated epidermal
protein (TEGRE) in ovarian cancer.";
Gynecol. Oncol. 65:36-41(1997).
                                                                                                                                                  TISSUE=Placenta;
MEDLINE=97078686; PubMed=8918811;
                                                                                                                                                                                                                  Reiter J.L., Maihle N.J.;
"A 1.8 kb alternative transcript
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Biochem. 127:65-72(2000).
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Sato C., Kim J.-H., Abe Y., Satto K., Yokoyama S., Kohda D.;
"Characterization of the N-oligosaccharides attached to the atypical
ABB-X-Cys sequence of recombinant human epidermal growth factor
receptor.";
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"ATP-stimulated interaction between epidermal growth factor receptor
and supercoiled DNA.";
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Waterfield M.D.;
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MEDLINE=84191554; PubMed=6325948;
Macin G. Cohen S.
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MEDLINE=85270438; PubMed=2991899;
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MEDLINE=91107677; PubMed=1988448;
Haley J.D., Waterfield M.D.;
   OF 1-29 FROM N.A.
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             MEDLINE-98225196; PubMed-9556602;
Abe Y., Odaka M., Inagaki F., Lax I., Schlessinger J., Kohda D.;
"Disulfide bond structure of human epidermal growth factor receptor.";
J. Biol. Chem. 273:11150-11157(1998).
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MEDLINE=21153697; PubMed=11116146; DOI=10.1074/jbc.M008458200;
Habib A.A., Chatterjee S., Park S.-K., Ratan R.R., Lefebvre S.,
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J. Biol. Chem. 270:20242-20245(1995)
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                                                                                                                                                                                   MEDLINE=87297456; PubMed=3039909;
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 NNTL-VWKYADAGHVCHLCHPNCTYGCTGPGLEGCPTNGPKIP--SIATGMVGALLLLLLV
                                                           VLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVSR
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EMBL, AYS80246; AAS83109.1; -. SEQUENCE 1210 AA; 134276 MW; D8A2A50B4EPB6EDZ CRC64;
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Catarrhini; Hominidae; Homo.
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14-ARR-2004 (TrEWBLrel. 27, Created)
14-ARR-2004 (TrEWBLrel. 27, Last sequence update)
14-ARR-2004 (TrEWBLrel. 27, Last sequence update)
Epidermal growth factor receptor (Erythroblastic leukemia viral (V-erb-b) oncogene homolog, avian).
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Mammalia; Eutheria; Primates;
NCBI_TAXID=9606;
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1023 YLVPQQGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAG 1082
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                                                                                                                                                                                                                                                                                                                                                                    360 RNCTSISGDLHILPVAFRGDSFTRTPPLDPKELDILKTVKEITGFLLIQAWPENRTGLHA 419
                                                                                     241 TGPRESDCLVCRRFRDEATCKDTCPPLMLYNPTTYQMDVNPLGKYSFGATCVKKCPRNYV 300
                                                                                                                                                                                                                                                                                                                                                                                                                       FONLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVFWDQ 484
                                                                                                                                                                                                                                                                                                                                                                                                                                       KVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVS 783
                                                                                                                                                                                                                                                                              305 STDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEF 364
                                                                                                                                                          301 VIDHGSCYRACSSDSYEV-EEDGVRKCKKCDGPCGKVCNGIGIGEFKDTLSINATNIKHF
                                                                                                                                                                                                                                                                                                                                                  365 AGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66 PTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNN
                   TGPKHSDCLACLHFNHSG1 CELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600 AGENSTL-IWKFADANHVCHLCHPNCTYGCVGPGLEGCAVDRPKIP--SIATGIVGGLLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    664 VVVLGVVFGILIKRRQOKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1083 SDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSET--DGYVAPLTCSPQPEYV
                                                                      TTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 605 KPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVV-GILL
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                                                                                                                                        TNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCA-RCKGPLPTDCCHEQCAAGC
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DVPDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSET--DGYVAPLTCSPQPEYVN
                       1201 GGAAPQPHPPPAFSPAFDNLYYWDQ-----DP-----PERGAPPSTFKGTPTAE
                                                                                                                                                            -----PTCVNSTFDSPAHWAQKGSHQISLDNPDYQQDFFPKEAKPNGIFKGS-TAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLALLAAHFQASPALEEKKVCQGTSNKLTQLGTFEDHFLSLQRMFNNCEVVLGNLEITYM
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                                                                   OPDVRPOPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYL-TPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART; SM00261; FU; 5.
SMART; SM00219; TyrKc; 1.
PROSITE; PS00119; TYRC; 1.
PROSITE; PS00110; PROTEIN KIMASE APP; 1.
PROSITE; PS00101; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
ATP-binding; Kinase; Receptor; Transferase; Tyrosine-protein kinase.
SEQUENCE 1209 AA; 133531 MW; 268E3FB11E36F90F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kim J.G., Vallet J.L., Nonneman D., Christenson R.K.;
Kim J.G., Vallet J.L., Nonneman D., Christenson R.K.;
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AX11/054; AAM7/472.1; -.
R GOS.GO.1005204; FrATP binding; IEA.
GOS.GO.1005524; FrATP binding; IEA.
GOS.GO.1005524; FrATP binding; IEA.
GOS.GO.1005524; Fransfermas activity; IEA.
GOS.GO.1006468; Fricansfermas activity; IEA.
GOS.GO.1006468; Fricansfermas activity; IEA.
GOS.GO.1006469; Fricansfermas activity; IEA.
GOS.GO.1006469; Fricansfermas activity; IEA.
GOS.GO.1006469; Fricansferman acid phosphorylation; IEA.
GOS.GO.100169; Priransfermenbrane receptor protein tyrosine kin. .;
RINTERPRO; IPR000494; EGER_L.
RINTERPRO; IPR000494; GOSTE_L.
RINTERPRO; IPR000494; EGER_L.
RINTERPRO; IPR000494; EGER_L.
RINTERPRO; IPR000494; EGER_L.
RINTERPRO; IPR000494; EGER_L.
RINTERPRO; IPR000494; FORT kinase.
RINTERPRO; IPR000494; FORT kinase.
RINTERPRO; PR000199; Recept Linase.
RINTERPRO; PR001099; Recept Linase.
REPRO; PR001099; Recept Linase; 1.
REPRO; PR00109; TYRKINASE.
REPRORM; PR00109; TYRKINASE.
REPRORM; PR00109; TYRKINASE.
REPRORM; PR00109; TYRKINASE.
REPRORM; PR00109; FORT kinase; 1.
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Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            107;
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                                                                                                                                                                                                                                                                                                                                                              01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OT-2004 (TrEMBLrel. 26, Last annotation update)
Epidermal growth factor receptor.
Sus scrofa (Pig).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ilarity 49.8%; Pred. No. 3.9e-156;
Conservative 178; Mismatches 350;
                                                                                                                                                                                                                                                                                                                                 PRT; 1209 AA
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49.8%; Pred. No. 3.9e
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Best Local Similarity
Matches 631; Conserv
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Human HER
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                               Abr82066 Adc09593 Adc09593 Adc05484 Adc62281 Adc45190 Adc45048 Add16655 Add17093 Adc35106 Adm12582 Adc38813 Adc
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/label= insertion region
/note= "suitable For foreign epitope insertion"
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/label= insertion_region
/note= "sultable for foreign epitope insertion"
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[Jabel = Ligand_binding_domain]
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|label= insertion_region
|note= "suitable For foreign epitope insertion"
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|Jabel= insertion region
|note= "suitable for foreign epitope insertion"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALIGNMENTS
                                                                                                                                                 ADE76190
ADF45048
ADJ66554
ADL90083
ADQ17193
ADC35106
ADM12582
ADO38813
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AAU98923
AAB21208
AAB21199
AAM51144
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/label= N-terminal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human heregulin 2 (Her2).
   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-AUG-2000
AAY92620;
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Domain
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Copyright (c) 1993 - 2005 Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This is the human heregulin 2 (Her2) sequence. Immunogenic analogues of Her2 can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. Regions suitable for the insertion of foreign T helper epitopes were identified (see features table). The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor BN (FGPB). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animal immune system of: (1) at least 1 BL-cell group derived from the PA and/or at least 1 BL-cell group derived from the PA and/or at least 1 BL-cell group derived from the PA and/or at least 1 BL-cell group derived from the PA and/or at least 1 BL-cell group derived from the PA and/or at least 1 BL-cell group which is corigin to the animal. Analogues of human PSM, human Her2 and human murine FGPBb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least prostate, prostate/breast or breast cancer when the PA is human PSM, FGFBb and Her2, respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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/label= insertion region
/note= "suitable For foreign epitope insertion"
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                                                                                      /label= Cysteine_rich_domain
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/label= C-terminal_domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention provides a method of treating cancer by administering a conjugate of anti-ErbB antibody with a maytansinoid. In particular, the antibody is directed against ErbB2 (also known as HER2 and pl85neu). The method is particularly useful in the treatment of breast, ovarian, stomach, endometrial, salivary gland, lung, kidney, colon, colorectal, thyroid, pancreatic, prostate and bladder cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Treating tumors, particularly breast cancers, which overexpress an ErbB receptor and does not respond to an anti-ErbB antibody, comprises conjugating the antibody to a maytansinoid.
                                                                                   NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ
                                                                  AGSDVPDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
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                                                                                                                                                                                                                                                                                                                                                                                                          Human; HER2; BrbB2 receptor; p185neu; maytansinoid conjugate; cancer;
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ilarity 100.0%; Pred. No. 0;
Conservative 0; Mismatches
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16-MAR-2000; 2000US-0189844P.
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N-PSDB; AAF24297.
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Matches 1255;
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The invention relates to synthetic therapeutic compounds (antigenic peptides) with enhanced binding to major histocompatibility complex (MHC) molecules and enhanced immunoregulatory properties relative to their natural counterparts. Compounds of the invention are useful for inducing an immune response in a subject and for use in adoptive immunotherapy. They are useful as components of anti-cancer vaccines and to expand immune effector cells that are specific for cancers characterised by expression of the breast cancer antigen, HER-2. Polynucleotides that cancer encode peptides of the invention are useful as hybridisation probes and as primers for the detection of genes of gene transcripts that are expressed in antigen presenting cells (APCs), to confirm transduction of polynuse-type receptor, HER-2. Compounds of the invention are designed based on the HER-2 antigenic peptide (774-782)
for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel synthetic therapeutic compound for inducing immune response and use in adoptive immunotherapy, has enhanced binding to major histocompatibility molecules and enhanced immunoregulatory properties.
                                                 GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
                                                                                                                                                                                                                                                                                              Therapeutic compound; major histocompatibility complex; vaccine; antigenic peptide; MRC; immunoregulatory; immune response; HBR-2; adoptive immuncherapy; anti-cancer; breast cancer antigen; APC; antigen presenting cell; human; tyrosine kinase-type receptor.
                                                                    Human tyrosine kinase-type receptor, HER-2.
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774. .782
/note= "Antigenic epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  netive human HER2 protein in its mammary gland cells, useful as tumor models for testing HER2-directed cancer therapies, and for identifying anticancer agents.
                                                                                                   MELAALCRWGLILALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
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Matches 1255; Conservative 0; Mismatches
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 1 MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         response against a polypeptide antigen in a naimal, including human. The method comprises administering the polypeptide antigen or at least one variant which includes at least one first T-helper cell epitope that is foreign to the animal (foreign TH epitope) and is formulated with immunogenic. The polypeptide antigen is weakly immunogenic or nontimmunogenic or its variant are useful in the preparation of an immunogenic composition for inducing or enhancing an immune response, particularly CIL response, against the polypeptide or tick or inducing or enhancing an immune response is useful in treating or ameliorating cancer, e.g. prostate or breast cancer. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention relates to a method for inducing or enhancing an immune
                                                                                                                                                                                                                                                        Human, immune response, T-helper cell epitope, chitosan, CTL respovaccine, prostate cancer, breast cancer, Her2 antigen, cytostatic,
                antigen"
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ilarity 100.0%; Pred. No. 0;
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03-NOV-2000; 2000US-0245166P.
18-JUN-2001; 2001DK-00000936.
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Matches 1255; Conserv
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          NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVPAFGGAVENPEYLFPQ 1200
                                                                                                                                                                                                                                    Human; HER2; ExbB; epidermal growth factor receptor; receptor; anti-ExbB antibody-maytanninoid conjugate; cancer; tumour; breast; ovary; stomach; endometrium; salivary gland; lung; kidney; colon; colorectum; thyroid; pancreas; prostate; bladder; ExbB2; neuronal disorder; glial disorder; astrocytal disorder; hypothalamic disorder; glandular disorder; astrocyphagal disorder; epithalial disorder; stromal disorder; blastocoelic disorder; inflammatory disorder; angiogenic disorder; inmunological disorder.
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Monahan JE, Myer V, Wang Y, Xu Y, Zhao X, Meyer
Hortobagyi GN, Pusztai L, Meric F, Sahin A, Mills
                                                                                                                                                                                                                                             cancer associated protein sequence SEQ ID NO:126.
                                                                                                                                                                                                                                                                 cancer; cytostatic; gene therapy.
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T cell; chromosome 17q21-q22.
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                                                                                                                             Novel epitopes useful as vaccines, comprises peptides or nucleic acid encoding the peptides, that are useful epitopes of target-associated antigens.
                                AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A composition for diagnosing, preventing or treating disorders characterized by ErbB2 overexpression (e.g. breast cancer) comprises an ErbB2 binding peptide that binds specifically to the extracellular domain of ErbB2.
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NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 1200
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes crystals of a complex (C) of epithelial growth factor receptor (EGFR), containing a dimer of a complex of EGF with EGFR in the molar ratio 1:1.

C containing a dimer of a complex of EGF with EGFR in the molar ratio 1:1.

Also described: (1) preparation of EGFR which can be crystallised, in the recombinant EGFR is prepared using lecs cells and then complex of EGFR is prepared using lecs cells and then complex of the accordance of the EGFR with EGF or with EGFR with another EGFR activity regulator (1), in which crystallisable EGFR is contacted with EGF or (1); (3) screening potential (1) by determining the fit of the 3D structure of (1) to that of the EGFR EGFR complex; (4) substances obtained by the screening method for use as agonists and antagonists of EGFR; (5) screening EGFR mitteraction site, by comparing their 10 that of EGFR complex; (6) preparation of anti-EGFR dimerisation region or in the EGFFR; (5) design of epitopes using the 3D structure of that of EGFR complex; (6) preparation of anti-EGF or anti-EGFR antibodies using the EGFR (1) antibodies using the 3D structure of the EGF-EGFR complex; (6) preparation of anti-EGF or anti-EGFR antibodies using the epitopes identified; (7) anti-EGF or anti-EGFR antibodies using the complex; (6) preparation of anti-EGF or anti-EGFR antibodies using the complex is method; and (8) polypeptides and their salts containing all or part of the amino acid sequence of the EGFR (including stomach ulcer; skin ulcer and ulcer and ulcers (including stomach ulcer; skin ulcer and ulcers (including stomach ulcer; skin ulcer and ulcer arising from diabetic complication). Parkinson's disease, bone cresorption disorders and ringworm. The present sequence represents a human ErbBE2 amino acid sequence, which is used in the experience of the effective of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Crystalline complex of epithelial growth factor with its receptor for design of ligands and antibodies to the receptor for treatment of ulcers, cancer and Parkinson's disease.
                                                                                                                                                                                                                                                                            antiparkinsonian, fungicide;
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                                                                                                                                                                                                                                                        epithelial growth factor receptor; EGFR; cytostatic; hepatotropic; antiulcer; antidiabetic; dermatological; antiparkinsonian; fungici cancer; cancer proliferation; liver function disorder; ulcer; Parkinson's disease; bone resorption disorder; ringworm; human; protein co-ordinate data; ErbB2.
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                  GGAAPQPHPPPARSPARDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV
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Shinozaki N
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Muramatsu H,
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                                                                                                              standard; protein; 1255
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Score 6812;
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inhibiting the interaction between a heregulin polypeptide and HBR3 polypeptide, e.g. for treating cancer. The polypeptide is also useful stimulating or activating HBR3 receptor. This sequence represents the wild type human HBR-2 polypeptide.
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                                                                   EEYLVDQQGFFCPDFAPGAGGWVHHRHRSSTRSGGGDLTLGLEPSEEEAPRSPLAPSGG 1080
                                                                                                                                   AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV 1140
 NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 1200
                                                                                                                                                                                                  Novel human epidermal growth factor receptor 3 variant as agonist or antagonist of HER3 receptor, for diagnosis/treatment of cells or pathological conditions associated with aberrant expression of heregulin or HER3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            catic; human epidermal growth factor receptor-3; HER-3; heregulin; tyrosine kinase activity; cancer; receptor.
                                                                                                                 AGSDVPDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
                                                                                                                                                                                                                                                               EEYLVPQQGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEG
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preventing or treating malignant neoplasia. The disease treated is preferably breast cancer. The present sequence is that of a human malignant neoplasia-related protein which may be used in the method the invention.
                                                                                                                         100.0%; Score 6812;
100.0%; Pred. No. 0;
ive 0; Mismatches
                                                                                                                                             Best Local Similarity 100.
Matches 1255; Conservative
                                                                                                                                           Similarity
                                                                                           Sequence 1255 AA;
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   HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM
                                                            IDSECRPRERIVSEFSRMARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA
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                                   IDSECRPRFRELVSEFSRMARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA
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r; mesenchymal cancer;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human malignant neoplasia-related protein SeqID36
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                                                                                                                                                                                                                                                                                                                                                                                                                                      standard; protein; 1255 AA.
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                                                                                                                                                                                                                                                                                                                                               epitope; epitope cluster; virucide; cytostatic; vaccine; viral infection;
cancer; tumour; human; Her2-Neu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New polypeptides and encoding nucleic acids that are useful epitopes of target-associated antigens, useful for diagnosing and/or treating viral
                                                                                                                                                          EEYLVPQQGFFCPDPAPGAGGWVHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEG
                                                                                                                 AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
 HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPOPPICTIDVYMIMVKCWM
                                IDSECRPRFRELVSEFSRMARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA
                                                             EEYLVPQQGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEG
                                                                                                    AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
                    IDSECRPRFRELVSEFSRMARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA
                                                                                                                                                                                       GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
                                                                                                                                                                                                 Disclosure; SEQ ID NO 90; 357pp; English.
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N-PSDB; ADM72832.
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100.0%;
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                                                                                                                                                                                                                                                                                                              rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, systemic sclerosis, Sjogren's syndrome; vasculitis; sarcoidosis, autoimmune haemolytic anaemia; autoimmune thrombocytopenia; thyroiditis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to human PRO polypeptides and the polymucleotides encoding them. The polypeptides and polymucleotides are useful for treating and diagnoshing immune related disorders in mammals. The immune related disorders in mammals. The immune arthritis, osteoarthritis, juvenile chronic arthritis, systemic sclerosis, Sjogren's syndrome, vasculitis, sarcoidosis, autoimmune haemolytic anaemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, demyelinating diseases of the central or peripheral nervous system, demyelinating diseases of the duillan-Barre syndrome and chronic inflammatory demyelinating bolymeuropathy. This sequence represents a human FRO polypeptide of the invention.
NOPDVRPOPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ
                                                                                                       NÓPDVRPÓPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ
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                                                                                                                                                                                                                                                                                                    PRO; immune related disorder; systemic lupus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721 RKVKVLGSGAFGTVYKGIMIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM
                                                                                                                     MELAALCRWGLLLALLPPGAASTQVCTGTDWKLRLPASPETHLDMLRHLYQGCQVVQGNL
                                                                                                                                                                                       ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG
                                                                                                                                                                                                               DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA
                                                                                                                                                                                                                                                                                                                 121 DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA
                                                                                                                                                                                                                                                                                                                                                                           LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWFDSLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DLSVFQNI QVIRGRIIHNGAYSLTIQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YVSRILIGICLISTVQLVIQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HOSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPOPPICTIDVYMIMVKCWM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDSECRPRFRELVSEFSRMARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA
                                                                                                                                                                                                                                                                                                                                                                                                                       LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PWDOLFRNPHOALLHTANRPEDECVGEGLACHOLCARGHCWGPGPTQCVNCSQFLRGQEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVG
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                                                                                            MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL
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Length 1255;
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Score 6812;
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1021 EEYLVPQQGFFCFDPAFGAGGAVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSFLAPSEG 1080	BEYLVPQQGFFCPDPAPGAGGWVHRHRSSSTRSGGGDLTLGLEPSEERAPRSPLAPSEG 1080	1081 AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV 1140	AGSDVFDGDLGMGAAKGLQSLPTHDPSFLQRYSEDPTVPLPSETDGYVAPLTCSPQPEXV 1140	NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 1200	1141 NOPDVRPQPPSREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 1200	GGAAPQPHPPPARSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255	.1201 GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255	
1021	1021	1001	1081	1141	1141	1201	.1201	
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Search completed: January 25, 2005, 21:23:22 Job time : 138.725 secs

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GenCore version 5.1.6
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- protein search, using sw model OM protein January 25, 2005, 21:16:15; Search time 36.1624 Seconds (without alignments) 3277.960 Million cell updates/sec Run on:

US-09-806-703A-4_COPY_24_1255 6694 1 QVCTGTDMKLRLPASPETHL.....TFKGTPTAENPEYLGLDVPV 1232 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

Total number of hits satisfying chosen parameters:

283416 segs, 96216763 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Maximum Match 100% Listing first 45 summaries Post-processing: Minimum Match 0%

pirl:* pir2:* pir3:* PIR 79:* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		d			SUMMAKIES	
Result	9	Query	1 condition	2	Ę	, to
	2000	יומרכז		3 !	er t	Description
7	6688	99.9	12	7	A24571	protein-tyrosine k
7	5894.5	88.1	-	~	148161	p-185 precursor -
m	5889	88.0	1260	Н	TVRTNU	protein-tyrosine k
4	3157	47.2		-	GOHUE	epidermal growth f
2	3134	46.8		~	A53183	epidermal growth f
9	3118.5	46.6		ч	TVCHLV	epidermal growth f
7	2999.5	44.8	1308	~	A47253	
80	2695	40.3		1,	S06142	~
σ,	2427.5	36.3		~	A36223	kinase-related tra
	2344	35.0		7	JC4387	epidermal growth f
11	1766.5	26.4		Н	TVFVLV	protein-tyrosine k
12	1703	25.4		Н	TVYUH	protein-tyrosine k
13	1652.5	24.7		Н	GOFFE	epidermal growth f
14	1647	24.6	544	~	S35745	protein-tyrosine k
15	1640	24.5		~	800727	kinase-related tra
16	1623	24.2		~	B44776	protein-tyrosine k
17	1621	24.2		Н	TVFVEB	protein-tyrosine k
18	1525.5	22.8		7	A36325	epidermal growth f
19	1302	٠	_	~	E88257	protein let-23 [im
20	1302	19.5	1374	~	870712	protein-tyrosine k
21	1214	18.1	_	~	870713	➣
22	1177	•	-	-	A45558	epidermal growth f
23	1152.5	17.2		~	A42032	
24	997.5			~	A27131	epidermal growth f
25	806.5	12.0		~	S13807	~
	754.5		31	7	S13808	protein-tyrosine k
27	720.5	10.8	7	~	T43220	insulin-like growt
28	_	10.7	1382	-	INHUR	insulin receptor p
29	708.5	10.6	1372	7	A34157	insulin receptor p

A,Molecule type: DNA A,Residues: 832-909 <REX> A,Residues: 832-909 <REX> A,Cross-references: GB:L29395; NID:g459807; PIDN:AAA35809.1; PID:g459808 R;Tal, M.; King, C.R.; Kraus, M.H.; Ullrich, A.; Schlessinger, J.; Givol, D. A)C. Cell. Biol. 7, 2597-2601, 1987 A;Title: Human HRRZ (neu) promocter: evidence for multiple mechanisms for transcriptions A,Reference number: 157622; MUID:87286898; PMID:3039351

A;Status: translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-191 <TAL>

........ Amplification of a novel v-erbB-related gene in a human mammary carcinoma. A;Reference number: 159509; MUID:85272597; PMID:2992089

A;Status: translated from GB/EMBL/DDBJ

A;Molecule type: mRNA A;Residues: 1-517,'RALL',522,'S',524-654,'V',656-1169,'A',1171-1255 <COU2> A;Cross-references: GB:M11730; NID:g183986 R;King, C.R.; Kraus, M.H.; Aaronson, S.A. Science 229, 974-976, 1985 A;Title: Amplification of a novel v-erbB-related gene in a human mammary ca

A; Accession: B44188

insulin receptor p	insulin-like growt	protein-tyrosine k	insulin receptor-r	insulin receptor-r	insulin-like growt	insulin-like growt	insulin receptor -	insulin receptor -	insulin receptor (protein-tyrosine k	protein-tyrosine k	tyrosine kinase Mp	protein-tyrosine k	protein-tyrosine k	protein-tyrosine k
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2 A36(2 T432	2 T185	2 B36	2 A36	1 IGH	2 A33	2 T30	1 A56	2 8572	2 I50	2 A54	2 849	1 805	2 833	2 A36
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10.6 1383 2	10.4 1607 2	10.2 1477 2	10.2 1268 2	1300 2	9.5 1367 1	9.4 1371 2	9.3 1390 2	9.3 2148 1	9.2 2101 2	8.8 952 2	8.8 987 2	8.8 977 2	1114 1	8.8 1091 2	976 2

ALIGNMENTS

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protein-tyrosine kinase (EC 2.7.1.112) erbB2 precursor - human
N;Alternate names: c-erb-B-2 protein precursor; kinase-related transforming protein erb
C;Species: Homo sapiens (man)
                                                           C; Date: 25-Oct-1987 #sequence revision 06-Dec-1996 #text change 09-Jul-2004 C; Accession: A24571; A25491; A44188; B44188; I59509; I57622 R; Yamamoto, T.; Ikawa, S.; Akiyama, T.; Semba, K.; Nomura, N.; Miyajima, N.; Saito, T.; A; Itle: Similarity of protein encoded by the human c-erb-B-2 gene to epidermal growth A; Reference number: A24571; MUD:86118663; PMID:3003577 B-2 gene to epidermal growth B, MACCESSION: A24571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A, Molecule type: mRNA

A, Residues: 1-1255 cYMA-

A, Residues: 1-1255 cYMA-

A, Cross-references: UNIPROT: P04626; GB: X03363; NID: G31197; PIDN: CAA27060.1; PID: G31198

R, Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T.

R, Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T.

R, Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T.

A, Title: A v-exbB-related protooncogene, c-exbB-2, is distinct from the c-exbB-1/epidez.

A, Reference number: A25491; MUID: 86016729; PMID: 2995967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Residues: 737-1031 <SEM>
A; Residues: 737-1031 <SEM>
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A; Residues: 737-1031 <SEM>
A; Cross-references: GB:M1167; NID:g182163; PIDN: AAA35808.1; PID:g553282
B; Crossens, L.; Yang-Feng, T.L.; Liao, Y.C.; Chen, E.; Gray, A.; McGrath, J.; Seeburg, Science 230, 1132-1139, 1985
A; Title: Tyrosine kinase receptor with extensive homology to EGF receptor shares chromo A; Reference number: A44188; MUID:86070181; PMID:2999974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A, Accession: A44188
Modecule type: DNA
A;Residues: 740-910 <COUI>
A;Cross-references: GB:M12036; NID:g183988; PIDN:AAA35978.1; PID:g183989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Accession: A25491
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p-185 precursor - golden hamster
C;Species: Mesocricetus auratus (golden hamster)
C;Species: Mesocricetus auratus (golden hamster)
C;Species: Mesocricetus auratus (golden hamster)
C;Date: 0.2-ul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: 148161
R;Nakamura, T.; Ushijima, T.; Ishizaka, Y.; Nagao, M.; Arai, M.; Yamazaki, Y.; Ishikawa Gene 140, 251-255, 1994
A;Title: Cloning and activation of the Syrian hamster neu proto-oncogene.
A;Reference number: 148161; MUID:94193007; PMID:7908275
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-1254 <RES>
A;Residues: 1-1254 <RES>
A;Cross-references: UNIPROT:060553; GB:D16295; NID:g493236; PIDN:BAA03801.1; PID:g74759: C;Genetics:
A;Gene: neu
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: AFP
F;718-983/Domain: protein kinase homology <KIN>
F;726-734/Region: protein kinase ATP-binding motif
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        624 OPCPINCTHSCVDLDDKGCPAEORASPLTSIISAVVGILLVVVLGVVPGILIKRROOKIR
                                                                               KYTWRRILGETELVEPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTVYKGIWIPDG
                                                                                                                                                    804 GCLLDHVRENRGRLGSQDLLMWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITD
                                                                                                                                                                                                                                                                                                                      984 QREVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDABEYLVPQQGFFCPDPAPGAGGWV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1044 HHRHRSSSTRSGGGDLTLGLEPSEERAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
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                                                                                                                                 ENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVSRLLGICLTSTVQLVTQLMPY
                                                                                                                                                                                                                 GCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITD
                                                                                                                                                                                                                                                                                                  FGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPY
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Fig. 2-1255/Product: protein-tyrosine kinase erb82 #status predicted <MAT>
Fig. 2-635/Domain: extracellular #status predicted <EXT>
Fig. 2-635/Domain: BGF receptor extracellular domain repeat <EE1>
Fig. 2-655/Domain: BGF receptor extracellular domain repeat <EE2>
Fig. 2-655/Domain: EGF receptor extracellular domain repeat <EE2>
Fig. 2-655/Domain: intracellular #status predicted <TWM>
Fig. 2-555/Domain: intracellular #status predicted <TWM>
Fig. 2-1255/Domain: protein kinase homology <KIN>
Fig. 2-1255/Domain: protein kinase ATP-binding motif Fig. 2-1255/Domain: protein kinase ATP-binding motif Fig. 2-1255/Domain: protein kinase ATP-binding motif Fig. 2-1255/Domain: phosphate (Thr) (covalent) (by protein kinase C) #status predicted Fig. 3/Active site: Lys #status predicted (Tyr) (covalent) (by autophosphorylation)
                                                                           A;Cross-references: ODB:120613; OMIM:164870
A;Map position: 17q21.1-17q21.1
A;Introns: 25/1; 75/3; 147/1; 883/3
A;Note: the list of introns is incomplete
C;Function:
A;Description: catalyzes the phosphorylation of a peptidyl tyrosine residue by ATP
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphoprotein; phospho
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  PIDN:AAA58637.1; PID:g553332 of this erbB-related gene occurs
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Pred. No. 1.8e-270;
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A, Cross-references: GB:M16792; NID:g183983; C; Comment: Amplification and overexpression
                                                                  NEU; HER-2
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                                                                A; Gene: GDB: ERBB2; NGL;
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protein-tyrosine kinase (EC 2.7.1.112) neu precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change 09-Jul-2004
C;Accession: A24562; A61204
R;Bargmann, C.I.; Hung, M.C.; Weinberg, R.A.
Nature 319, 226-230, 1986
A;Title: Tite neu oncogene encodes an epidermal growth factor receptor-related protein.
A;Reference number: A24562; MUID:86118662; PMID:3945311
A;Reference number: A24562; MUID:86118662; PMID:3945311
A;Residues: 1-1260 cBAR>
A;Cross-references: UNIPROT:P06494; EMBL:X03362; NID:g56745; PIDN:CAA27059.1; PID:g5674
B;Masui, T.; Mann, A.M.; Macatee, T.L.; Garland, E.M.; Okamura, T.; Smith, R.A.; Cohen, Carcinogenesis 12, 1975-1978, 1991
A;Title: Direct DNA sequencing of the rat neu oncogene transmembrane domain reveals no action and action action and action acti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphorotein; phosphorotein; phosphorotein; glycoprotein; phosphorotein; protein eaquence #status predicted <SIG.
F;10-1260/Product: protein-tyrosine kinase neu #status predicted <MMT>
F;658-680/Domain: transmembrane #status predicted <TWN>
F;723-986/Domain: protein kinase homology <KIN>
F;71,191,263,535,576,634/Binding site: carbohydrate (Asn) (covalent) #status predicted F;71,191,263,535,576,634/Binding site: carbohydrate (Asn) (covalent) #status predicted F;759/Active site: bys #status predicted F;882,1227,1253/Binding site: phosphate (Tyr) (covalent) #status predicted
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87.8%; Pred. No. 2.5e-237;
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A,Status: preliminary
A,Mohecule type: DNA
A,Mohecule type: DNA
A,Residues: 637-663,'V',665-702 <MAS>
A,Note: authors translated the codon GCA for residue
A,Genetics:
A,Genetics:
A,Genetics:
                                                                                          50; Mismatches
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Matches 1084; Conservative
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VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
                           SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
                                                                                                                 SLTBILKGGVLIRGNPQLCYQDTVLWKDVFRKNNQLAPVDIDTNRSRACPPCAPACKDNH
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A; Reference number: A00641; MUID:84219729; PMID:6328312
A; Accession: A00641
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A; Accession: A00641
A; Modecule type: mRNA
A; Residues: 1-1210 «ULL>
A; Residues: 1-1210 «ULL>
A; Cross-references: UNIPROT:P00533; EMBL:X00588; NID:931113; PIDN:CAA25240.1; PID:97579
A; Note: the authors translated the codon AAG for residue 540 as Asn
B; Eshii, S.; Xu, Y.; Stratton, R.H.; Ros. B.A.; Merlino, G.T.; Pastan, I.
Proc. Natl. Acad. Sci. U.S.A. 82, 492-4924, 1985
A; Title: Characterization and sequence of the promoter region of the human epidermal gr.
A; Reference number: A25772; MUID:85270438; PMID:2991899
A; Accession: A25772
A; Status: translation not shown
A; Modecule type: DNA
A; Residues: 1-29 «ISH>
A; Cross-references: GB:M11234; NID:g181981; PIDN:AA852370.1; PID:g553272
A; Cross-references: GB:M11234; NID:g181981; PIDN:AA852370.1; PID:g553272
A; Title: The human EGF receptor gene: structure of the 110 kb locus and identification of A; Argeference number: S30024; MUID:8821733; PMID:3329716
A; Argeference number: S30024; MUID:88217333; PMID:3329716
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A;ACCESSION: A00642
A;Wolecule type: mRNA
A;Residues: 'RCAWRRA',150-187, 'KSVIQAV',195,'M',197,'A',199-222,'S',224-304,'RA',307-321
A;Residues: 'RCAWRRA',150-187, 'KSVIQAV',195,'M',197,'A',199-222,'S',224-304,'RA',307-321
A;Residues: 'RCAWRRA',150-187, 'KSVIQAV',195,'M',197,'A',199-222,'S',224-304,'RA',180-312
A;Experimental source: A431 human carcinoma cells, which have large numbers of EGF receg
R;Lin, C.R.; Chen, W.S.; Kruiger, W.; Stolarsky, L.S.; Weber, W.; Evans, R.M.; Verma, I
Science 224, 843-848, 1984
A;Title: Expression cloning of human EGF receptor complementary DNA: gene amplification
A;Recession: A43615; MUID:84196372; PMID:6326261
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R;Haley, J.D.; Waterfield, M.D.
J. Biol. Chem. 266, 1746-1753, 1991
A;Pitle: Contributory effects of de Novo transcription and premature transcript
A;Reference number: A38672; MUID:91107677; PMID:1988448
A;Accession: A38672
A,Nolecule type: DNA
A;Residues: 1-29 cHAL>
A;Residues: 1-20 cHAL>
A;R
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A; Residues: 713-964 <LIN>
A; Residues: 713-964 <LIN
B; Simmen, F.A.; Gope, M.L.; Schulz, T.Z.; Wright, D.A.; Carpenter, B; Simmen, Biophys. Res. Commun. 124, 125-132, 1984
A; Reference number: A23062; MUID:85046483; PMID:6093780
A; Reference number: A23062
A; Molecule type: mRNA
A; Residues: 1028-1210 <SIM>
B; Weber, W.; Gill, G.N.; Speiss, J.
Science 224, 294-297, 1984
Science 224, 294-297, 1984
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A,Molecule type: DNA
A,Residues: 1-29 <HA2>
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A:Title: Human epidermal growth factor receptor cDNA sequence and aberrant expression
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epidezmal growth factor receptor precursor - mouse
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: Oc-Jan-1995 #sequence revision 06-Jan-1995 #text change 09-Jul-2004
C;Accession: A53183; A43818; $24492; A28941; S45325; 149643
R;Luetteke, N.C.; Phillips, H.K.; Qiu, T.H.; Copeland, N.G.; Earp, H.S.; Jenkins, N.A.; Gens Dev. 8, 399-413, 1994
A;Title: The mouse waved-2 phenotype results from a point mutation in the EGF receptor A;Reference number: A53183; MUID:94170986; PMID:8125255
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A; Residues: 1-1210 <LUBs>
A; Cross-references: UNIPROT: Q01279; GB: U03425
A; Cross-references: UNIPROT: Q01279; GB: U03425
B; Avivi, A.; Lax, I.; Ullrich, A.; Schlessinger, J.; Givol, D.; Morse, B.
Oncogene 6, 673-676, 1991
A; Title: Comparison of EGF receptor sequences as a guide to study the ligand A; Reference number: A43818; MUID: 91232866; PMID: 2030916
                                               1076 QSLPTHDPSPLQRYSEDPTVPLPSET--DGYVAPLTCSPQPEYVNQPDVRPQPPSPREGP
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                                                                                                                                     IPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVSRLEGICLTSTVQLVTQ
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A; Residues: 1-714 <ANYS>
A; Cross-references: GB:X59698
R; Eisinger, D.P.; Serrero, G.
submitted to the EMBL Data Library, Ju
A; Reference number: $24942
A; Accession: $24942
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A;Residues: 969-971, Kr, 973-1115,'D'
A;Cross-references: EMBL:212608
R;Heisermann, G.J.; Gill, G.N.
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                                                                                                                                                                       A; Gene: GDB:EGFR
A; Cross-references: GDB:120610; OMIM:131550
A; Map position: 7p12.3-7p12.1
C; Superfamily: epidermal growth factor receptor; protein kinase homology
C; Superfamily: epidermal growth factor receptor; protein kinase homology
C; Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphorylation: signal sequence #status predicted <SIG>C; Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphorylation: signal sequence #status predicted <AMT>
F; 12-54 Domain: extracellular #status predicted <AMT>
F; 25-645 Domain: EGF receptor extracellular domain repeat <EEL>
F; 300-600 Domain: EGF receptor extracellular domain repeat <EEL>
F; 340-600 Domain: transmembrane #status predicted <IVM>
F; 646-668 Domain: transmembrane #status predicted <IVM>
F; 649-1210 (Domain: intracellular #status predicted <IVM>
F; 649-1046 (Region: protein kinase homology <IVM>
F; 710-975 (Domain: protein kinase homology <IVM>
F; 710-975 (Domain: inhibitory
F; 1210 (Region: inhibitory
F; 128, 175, 352, 413, 444, 528, 603/Binding site: carbohydrate (Asn) (covalent) #status predic
                             С. J.
A;Note: the EGF receptor (and other tyrosine kinases) can nick double-stranded DNA R;Chen, W.S.; Lazar, C.S.; Lund, K.A.; Welsh, J.B.; Chang, C.P.; Walton, G.M.; Der, C.J Cell 59, 33-43, 1989
A;Title: Functional independence of the epidermal growth factor receptor from a domain A;Reference number: A3331; MUID:9000323; PMID:2790960
A;Contents: annotation; internalization signal
C;Comment: Binding of EGF to the receptor leads to internalization of the EGF-receptor
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47.2%; Score 3157; DB 1; I
Best Local Similarity 49.9%; Pred. No. 5.6e-124;
Matches 624; Conservative 178; Mismatches 344;
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pridermal growth factor receptor precursor - chicken
NiContains: protein-tyrosine kinase (BC 2.7.1.112) erbB
C;Species: Gallus gallus (chicken)
C;Decies: Gallus gallus (chicken)
C;Date: 28.Peb-1996 #sequence_revision 05-May-1995 #text_change 09-Jul-2004
C;Accession: A27720; A00643
R;Lax, I.; Johnson, A.; Howk, R.; Sap, J.; Bellot, F.; Winkler, M.; Ullrich, A.; Vennstr Mol. Cell. Biol. B; 197720; MulD:88261272; PMID:3260329
A;Reference number: A27720; MulD:88261272; PMID:3260329
A;Accession: A27720.
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A;Residues: 1-1223 <LAX>
A;Cross-references: UNIPROT:P00534; GB:M20386
Rillsen, T.W.; Maroney, P.A.; Goodwin, R.G.; Rottman, F.M.; Crittenden, L.B.; Raines, P. Rillsen, T.W.; 1985
A;Title: G-erbB activation in ALV-induced erythroblastosis: novel RNA processing and profeserence number: A;Reference number
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J. Biol. Chem. 263, 13152-13158, 1988

A;Title: Epidermal growth factor receptor threonine and serine residues phosphorylated in A;Reference number: A28941; MUID:88330814; PMID:3138233
A;Accession: A28941
A;Accession: A28941
A;Molecule type: protein
A;Molecule type: protein
A;Molecule type: protein
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A;Description: The complete cDNA sequence of the Mouse Epidermal Growth Factor Receptor
A;Description: The complete cDNA sequence of the Mouse Epidermal Growth Factor Receptor
A;Description: The complete cDNA sequence of the Mouse Epidermal Growth Factor Receptor
A;Description: Type: DR
A;Accession: S45325
A;Status: preliminary
A;Accession: S45325
A;Status: preliminary
A;Cross-references: EMBL:X78987; NID:9488830; PIDN:CAA55587.1; PID:9488831
A;Cross-references: EMBL:X78987; NID:9488830; PIDN:CAA55587.1; PID:9488831
A;Title: Expression of the epidermal growth factor receptor gene is regulated in mouse ba; A;Accession of the epidermal growth factor receptor gene is regulated in mouse ba; A;Accession of the epidermal growth factor receptor gene is regulated in mouse ba; A;Accession of the epidermal growth factor receptor gene is regulated in mouse ba; A;Accession of the epidermal growth factor receptor gene is regulated in mouse ba; A;Accession of the epidermal growth factor receptor gene is regulated in mouse ba; A;Accession of the epidermal growth factor receptor gene is regulated in mouse bases and the protein and the epidermal growth factor receptor gene is regulated in mouse bases and the procession of the epidermal growth factor receptor gene is regulated in mouse bases and the procession of the epidermal growth factor receptor gene is regulated in mouse bases and the procession of the epidermal growth factor receptor gene is regulated in mouse bases and the procession of the epidermal growth factor receptor gene is regulated in mouse bases 
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A,Status: translated from GB/EMBL/DDBJ
A,Molecule type: mRNA
A,Residues: 12-20,22-132 <RES>
A,Cross-references: GB:L06864; NID:g193001; PIDN:AAA53029.1; PID:g567201
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49.9%; Pred. No. 5e-123;
tive 170; Mismatches 352; Indels 108;
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c; Species: Homo sapiens (man)
C; Steepersian: A47253
R; Plowman, G.D.; Culouscou, J.M.; Whitney, G.S.; Green, J.M.; Carlton, G.W.; Foy, L.; N
Proc., Natl. Acad. Sci. US.A. 90, 1746-1750, 1939
A; Title: Ligand-specific activation of HER4/p180erbB4, a fourth member of the epidermal
A; Reference number: A47253
A; Reference number: A47253
A; Residues preliminary; not compared with conceptual translation
A; Molecule type: nucleic acid
A; Molecule type: nucleic acid
A; Mossidues: 1-1308 cPLO.
A; Residues: 1-1308 cPLO.
A; Residues cextracted from NCBI backbone (NCBIP:126842)
C; Superfamily: epidermal growth factor receptor; protein kinase homology
C; Sywords: Afronsule in protein kinase homology < KIN>
F; 716-981/Domain: protein kinase homology exilos
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                                                      A; Residuces: Sub-1223 < NULD>
A; Residuces: Sub-1223 < NULD>
A; Reconsticus:
C; Genetics:
A; Genee: exbB
C; Superfamily: epidermal growth factor receptor; protein kinase homology
C; Superfamily: epidermal growth factor receptor; protein kinase homology
C; Reywords: alternative splicing; ATP; autophosphorylation; glycoprotein; growth factor
C; Superfamily: extracellular sequence #status predicted < SIG>
F; 1-10.0 Domain: extracellular #status predicted < EXT>
F; 1-10.0 Domain: EGF receptor extracellular domain repeat < EEL>
F; 10.0 Domain: EGF receptor extracellular domain repeat < EEL>
F; 10.0 Domain: EGF receptor extracellular domain repeat < EEL>
F; 10.0 Domain: protein kinase homology < KIN>
F; 10.0 Bomain: protein kinase homology < KIN>
F; 10.0 Bomain: protein kinase homology < KIN>
F; 10.0 Bomain: protein kinase ATP-binding motif F; 10.0 Bomain: protein kinase ATP-binding motif F; 10.0 Bomain: protein kinase ATP-binding motif F; 10.0 Bomain: protein kinase (Ser) (covalent) #status predicted F; 687 Mainding site: carbohydrate (Ser) (covalent) #status predicted F; 10.0 Bomain site: Lys #status predicted Tyr) (covalent) (by protein kinase C) #status predicted F; 10.0 Bomain Site: Lys #status predicted Tyr) (covalent) (by autophosphorylation) #status Fill 10.0 Bomain Site: Lys #status predicted Tyr) (covalent) (by autophosphorylation) #status Fill 10.0 Bomain Site: Lys #status predicted Tyr) (covalent) (by autophosphorylation) #status Fill 10.0 Bomain Site: Fill 10.0 
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46.6%; Score 3118.5; DB 1; Length 1223;
Best Local Similarity 49.1%; Pred. No. 2.2e-122;
Matches 626; Conservative 174; Mismatches 336; Indels 139; Gaps
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Db 1137 PERSPRGELDEGYMTPN Qy 1151 SPGKNGVVKDVFAFGGAV Qy 1150KNGDLQFSPAI Qy 1190FSPAI Db 1220 EYLKNNILSMPEKAKKAI Qy 1221 ENPEYL 1226 Db 1280 ENPEYL 1285	RESULT 8 S06142 protein-tyrosine kinase (EC 2.7 NyAlternate names: epidermal grc C; Species: Xiphophorus maculatus C; Date: 10.569-1999 #sequence_rc C; Accession: S06142; N3809 R;Wittbrodt, J.; Adam, D.; Malis Nature 341, 415-421, 1989 A;Title: Novel putative recepto A;Reference number: S06142; MUIA A;Residues: 1-1166 <wit> A;Adam, D.; Maeueler, W.; Schar' Oncogene 6; 73-80, 1991 A;Adam, D.; Maeueler, W.; Schar' Oncogene 6; 73-80, 1991 A;Reference number: S13807; MUIA A;Residues: Prininnary; translat. A;Andernus: preliminary; translat. A;Residues: 821-1025, NY, 1027-1 A;Cenetics: A;Genetics: A;Genet</wit>	DD 144 NLTEILSGGWWSHNPL QY 181 CWGESSEDCQSLTRTVC DD 204 CWAPGPGHCQKFKLLC QY 240 ICELHCPALVTYNTDTF
LIAHNOVROVPLORLRIVRGTOLFEDNYALAVLDNGDPLNNTTPVTGASFGGLRELOLRS 12	CUTOCPOTEVINPTIPOLEMPINAKTYGAPCYKKÖPHNEV-UDSSSCVRACPSSROMEV- AEDOTORCEKCSKPCARVCYGLGMEHLREVRANTSANIOEFAGCKKIPGSLAFLEBEFDO EENIIKWCKPCTDICPKACOGIGTGSLASAOTYDSANIOEFAGCKKIPGSLAFLEBEFDO EENIIKWCKPCTDICPKACOGIGTGSLASAOTYDSANIOEFANCTKIGMLIFLYTGIGG DPAGNITAPLOPEQLOVPETLEEITGYLYISAMPDSLPDISVFONLOVIRGRILHNGAYSL	1007 FFCPDPAPGAGGWVHRRRSSSTRSGGGDLTLGLEPSEEBAPRS 1050
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1; 979/3; 1025/3; 1056/1
L factor receptor; protein kinase homology
r receptor; phosphotransferase; transmembrane protein; tyr:
= #status predicted <81G>
#status predicted <81G>
set transforming protein (Tu) #status predicted <MAT>
ase homology <AIN>
ase ATP-binding motif
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IID:91125882; PMID:1846957
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ALDNPEYHNASNG-----PPKAEDEYVNEPLYLNTFANTLGKA 1219
----- 1189
                                                                                                                                                              AFDNLYYWDQDPPERGA--PPSTFKGTPT------A 1220
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18; Pred. No. 8e-105;
162; Mismatches 382; Indels 132; Gaps
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9; NID:g65284; PIDN:CAA39763.1; PID:g65285
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                                                               GDPASNTAPLQPEQLQVFETLEBITGYLYISAWPDSLPDLSVFQNLQVIRGRILHNGAYS
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A36223
kinase-related transforming protein (erbB3) (EC 2.7.1.-) precursor - human C;Species: Homo sapiens (man)
C;Species: 04-Oct.1991 #sequence_revision 13-Jan-1993 #text_change 09-Jul-2004 C;Accession: A36223; I59164
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                                                        the ERBB/epidermal
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*Residues: 1-559, 'G', 561-957,'F', 959-1063,'G',1065-1342 <RES>
A;Cross-references: GB:M34309; NID:g183990; PIDN:AAA35979.1; PID:g306841
C;Genetics:
R;Kraus, M.H.; Issing, W.; Miki, T.; Popescu, N.C.; Aaronson, S.A. Proc. Natl. Acad. Sci. U.S.A. 86, 9193-9197, 1989
A;Title: Isolation and characterization of ERBB3, a third member of the A;Reference number: A36223; MUID:90083234; PMID:2687875
A;Reference number: A36223; MUID:90083234; PMID:2687875
A;Ratus: preliminary
A;Molecule type: mRNA
A;Residues: 1-1342 < KRA>
A;Residues: 1-1342 < KRA>
A;Residues: UNIPROT:P21860; GB:M29366
B;Plowman, G.D.; Whitney, G.S.; Neubauer, M.G.; Green, J.M.; McDonald Proc. Natl. Acad. Sci. U.S.A. 87, 4905-4909, 1990
A;Title: Molecular cloning and expression of another epidermal growth A;Reference number: 159164; MUID:90311312; PMID:2164210
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A;Status: preliminary; translated from GB/EMBL/DDBJ
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A;Cross-references: GDB:119880; OMIM:190151
A;Map position: 12q13-12q13
C;Superfamily: unassigned & Rer/Thr or Tyr-specific p C;Keywords: ATP; phosphotransferase
F;707-972/Domain: protein Kinase homology <KIN>F;715-723/Region: protein Kinase ATP-binding motif
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F;713-721/Region: protein kinase ATP-binding motif
F;939,1051,1156,1194,1196,1219,1257,1259,1273,1286,1325/Binding site: phosphate (Tyr)
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                                                                                                                                                    148;
                                                                                          Length 1339;
                                                                                          DB 2;
                                                                                                                                              Conservative 170; Mismatches 424;
                                                                                          35.0%; Score 2344; 41.0%; Pred. No. 3.
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R. Hellyer, N.J.; Kim, H.H.; Greaves, C.H.; Sierke, S.L.; Koland, J.G.

Gene 165, 279-284, 1995

A. Title: Cloning of the rat ExbB3 CDNA and characterization of the recombinant prote A; Reference number: JC4387; MUID: 96096535; PMID: 8522190

A. Reference number: JC4387; MUID: 96096535; PMID: 8522190

A. Residues: 1-1339 cHEL>
A. Molecule type: mRNA
A. Residues: 1-1339 cHEL>
A. Molecule type: MRNA
A. Residues: 1-1339 cHEL>
A. Cosser-references: GB: U29339; NID: 9915389; PID: 9915390
A. Experimental source: liver
A. Mote: The authors translated the codon AAC for residue 369 as Thr and GTT for res: C. Comment: This protein is a functional heregulin receptor that transduces signals: C. Comment: This protein kinase homology
C. Comment: ErbB3
C. Superfamily: protein kinase homology
C. Superfamily: growth factor receptor; liver; phosphoprotein; transmembrane protein: F:1-19/Domain: signal sequence #status predicted <SIG>F:1-19/Domain: transmembrane #status predicted <NMN>F:705-970/Domain: protein kinase homology <ANN>F:705-970/Domain: protein kinase homology <ANN-FIREDER *ANN-FIREDER *ANN-FIR
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N;Alternate names: ErbB3 protein; HER3 protein
C;Species: Rattus norvegicus (Norway rat)
C;Date: 17-Jan-1996 #sequence_revision 19-Apr-1996 #text_change 16-Aug-2004
                                                                                          : : | | : | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | | : | : | | : | : | | : | : | | : | : | | : | : | : | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : 
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743 EILDEAYWAGYGSPYVSRLIGICLTSTYQLVTQLMPYGCLLDHVRENRGRLGSQDLIANW 802	F;774/Bin F;843/Act F;1181/Bi	774/Binding site: phosphate (Thr) (covalent) (by protein kinase C) #status predicted;843/Active site: Lys #status predicted;1181/Binding site: phosphate (Tyr) (covalent) (by autophosphorylation) #status predic
CVQIAKGMNYLBERRIVHRDLAARNVLVKTPQHVKITDFGLAKLLGADEKEYHAEGGKVP 29	Best Local S Matches 413	imilarity 29.9%; Pred. No. 1.6e-61; Conservative 180; Mismatches 415;
863 IKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPP 922	රු සි	57 VQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASP 111 : :: :
ICTIDVYMIMVKCWMIDSECRPREPLASEFSRMARDPORFVVIQ-NEDLGPASPLDSTF	ò	GGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTN
358 ICTIDUYMIMUKCMMIDADSRPKFRELIAEFSKMARDPPRYLVIQGDERMHLPSPTDSKF 417	qq	82 SKMYTLEIPDLRDVLNGQVGFHNNYNLCHMRTIQMSEIVSNGTDAYYNYDFTAPERECPK 141
982. YRSLLEDDDMGDLVDAEEYLVPQQQFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLE 1041	کې وړ	172 CSPWCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDC 229 142 CHESCTHG-CWGEGPKNCQKFSKLTCSPQCAGGRCYGPKPRECCHLFCAGGCTGPTQKDC 200
1042 PSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVP 1096	ò t	230 LACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCT 289
LPSET DGYVAPLTCSPOPEYVNOPDVRPOPPSPREGPLPAARPAGATLERAKTLSPGK	3 6	LVCPLHNOEVTAEDGTORCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFG
	a 음	
1155 NGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPAFSPAFD 1195	& 8	350 SIAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSV 401 :: ::
1196 NLYYMDQDPPERGAPPSTFKGTPTAENPEY 1225 	\dot{\text{8}}	402 FQNLQVIRGRILHNGAY-SLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVFWD 460
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nal growth factor receptor - f	qq	AIQKEPEQKVWVNENLRADLCGKFLTILISVQHNIIMHIFAICREKWNHLLGSVQRGRLL
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ge de	an c	GOWNGOVETLUELUFUMALHKKLMALILUVOINOIQUASNEMULIUALIOSEOVEISLIIKK
meh, E.; Glazer, L.; Segal, D.; Schlessinger, J.; Shilo, B.Z. 40, 599-607, 1985 18: The Drosophila EGF receptor gene homolog: conservation of both hormone binding	රු සි	482VEGLA 487 547 ARVAIOSAGLAMELEDITARSASMEHSKTLPAEGROVPRWVELGVCASARAGIAMELAGR 606
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ecule type: DNA idues: 1-1330 <liv></liv>	3 8	AVCRKCHPLCELCTNYGYHEQVCSKCTHYKRREQCETECPADHYTDEEQREGFQ
SBS-references: UNIPROT:P04412; EMBL:R03054 BiBworth, S.C.; Vincent III, W.S.; Bilodeau-Wentworth, D. 314 178-180 1985	ò	540 CHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVK-PDL 585
18.37. A Drosophia genomic sequence with homology to human epidermal growth factor reference number: A38021; MUID:85137938; PMID:2983232	QQ	KLFDANETGPYVNSTMFNCT
ession: A38021 lecule type: DAA 'V' BAB_043 'CMDGTVW' WARD.	ð 6	586 SYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLG 645
DBS-references: EMBL:X02293; NID:97922; NID:37927, I; PID:9929565 mment: This sequence is tentative because the introns have not been identified.	8 8	VVFGI-LIKRRQQXIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKVKV
netics: ne: FlyBase:Egfr Sss-references: FlyBase:FBon0003731	qa	
o position: 2 57F per factor receptor; protein kinase homology prosphorode: ATP; autophosphorylation; duplication; glycoprotein; phosphoprotein; phosphorode:	oy B	703 LGSGAFGTVYKGIMIPDGENVKIPVALKVLRENTSPKANKEILDEAYVMAGVGSPYVSRL 762
Fil-134/Domain: extracellular #status predicted <exi> Fi733-764/Domain: transmembrane #status predicted <ivm> Fi765-1330/Domain: intracellular #status predicted <ivt> Fi768-1372/Domain: intracellular #status predicted <ivt></ivt></ivt></ivm></exi>	දු දු	763 LGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVRLVHRD 922 : :: :
816-824/Region: protein kinase ATP-binding motif 122,300,324,363,518,688,695,700/Binding site: carbohydrate (Asn) (covalent) #status pr	3 &	LAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQ

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936 880 992 1052 1105 1106 11106 11106	Qy 914 KGERLPQPPICTIDVYMIMWKCWMIDSECRPRFRELVBEFSRYDGIPAREIPDLLE 913 Cy 914 KGERLPQPPICTIDVYMIMWKCWMIDSECRPRFRELVBEFSRWARDPGRFVVIQ-NEDLG 972 L 914 KGERLPQPPICTIDVYMIMWKCWMIDSECRPRFRELVBEFSRWARDPRFYVIQ-NEDLG 972 L 914 KGERLPQPPICTIDVYMIMWKCWMIDSECRPRFRELVBEFSRWARDPRFYLVIQGDERWH 413 Qy 973 PASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGWVHRRRSSSTRSG 1032
RESULT 14 S15745 Protein-tyrosine kinase (EC 2.7.1.112) erbB - avian erythroblastosis virus C;Species: avian erythroblastosis virus C;Date: 03-Mar-1994 #sequence_revision 26-May-1995 #text_change 09-Jul-2004 C;Accession: S35745 R;Vennstroem, B. A;Reference number: S35743 A;Reference number: S35743 A;Reference number: S35743 A;Recession: S35745 A;Residues: 1-544 <ven> A;Residues: 1-544 <ven> C;Genetics: UNIPROT:Q85468; UNIPROT:Q64895; EMBL:X12707</ven></ven>	RESULT 15 S00727 Kinase-related transforming protein (erbB) (EC 2.7.1) - avian erythroblastosis virus C;Species: avian erythroblastosis virus C;Species: avian erythroblastosis virus C;Accession: S00727 R;Scotting, P; Vennstrom, B; Jansen, M.; Graf, T.; Beug, H.; Hayman, M.J. R;Scotting, P; Vennstrom, B; Jansen, M.; Graf, T.; Beug, H.; Hayman, M.J. A;Title: Common site of mutation in the erbB gene of avian erythroblastosis virus mutan A;Keference number: S00727; MUID:88217326; PMID:2897102 A;Accession: S00727 A;Molecule type: DNA A;Kesidues: 1.545 <sco> A;Kesidues: 1.545 <sco> A;Genetics: C;Genetics: C;Genetics: C;Genetics: C;Genetics:</sco></sco>
A;Gene: erbB C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: ATP; oncogene; phosphotransferase; transforming protein; tyrosine-specific p C;Keywords: ATP; oncogene; phosphotransferase; transforming protein; tyrosine-specific p F;135-400/Domain: protein kinase homology <kin:> F;143-151/Region: protein kinase ATP-binding motif F;170/Active site: Lys #status predicted P;170/Active site: Lys #status predicted Query Match Query Match Best Local Similarity 54.9%; Pred. No. 1.2e-61; Matches 345; Conservative 70; Mismatches 121; Indels 92; Gaps 15;</kin:>	C;Kejwords: ATP; phosphotransferase F;135-400/Domain: protein kinase homology <kin> F;143-151/Region: protein kinase ATP-binding motif Query Match Best Local Similarity 54.5%; Score 1640; DB 2; Length 545; Best Local Similarity 54.9%; Pred. No. 2.3e-61; Matches 345; Conservative 69; Mismatches 122; Indels 92; Gaps 15; Qy 555 GPEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDL 614</kin>
555 GPEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDL	615 DDKGCPAEQRASPLTSIVSAVV-GILLIVVVLGVVFGILIKRRQQKIRKYTWRRLLQGFBL
Qy 674 VEPLTPSGAMPNQAONRILKETELRKYKVLGSGARGTVYKGIWIPDGENVKIPVAIKVLR 733 Db 114 VEPLTPSGAAPNQAHLRILKETERKVKVLGFGARGTVYKGIWIPGGEKVTIPVAIKELR 173 Qy 734 ENTSPRANKEILDEAYVMAGVGSPYSRLLGGICLTGTVVLQLMPYGCLLDHVRENRG 793 Db 174 ENTSPRANKEILDEAYVMASVDNPHVCRLLGGICLTSTVQLITQLMPYGCLLDHVRENRG 793 Db 174 EATSPKANKEILDEAYVMASVDNPHVCRLLGGICLTSTVQLITQLMPYGCLLDHYREHKDN 233 Qy 794 LGSQDLIAWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETE 853 C 1	QY 734 ENTSPRANKEILDEAYVMAGVGSPYVSRLLGICLTSTVQLVTQLMPYGCLLDHYRENRGR 793 Db 174 EATSPKANKEILDEAYVMASVDNPHYCRLLGICLTSTVQLITQLMPYGCLLDYIREHKDN 233 QY 794 LGSQDLLAWGWQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHYKITDFGLARLLDIDETE 853 Db 234 IGSQYLLAWGVQIAKGMNYLEERHLVHRDLAARNVLVKTPQDVKITDFGLARQLGABEKE 293 QY 854 YHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLE 913 Db 294 YHAEGGKVVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGSKPYDGIPAREIPDLLE 913 Db 294 YHAEGGKVVPIKWMALESILLRRYTHQSDVWSYGVTVWELMTFGSKPYDGIPASEISSVLE 353

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1033 GGDLTLGLEPSEEEAPRSPL----APSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQ 1087
                                                                                                                                  1088 RYSEDPTVPLPSETDGYVAPLICSPOPEYVNQPDVRPQPPSPREGPLPAARPAGAT-LER 1146
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Q6ZMM4 BAD18701 Q6SAI6 AAR85155 AAR85225

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ALIGNMENTS

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Listing first 45 summaries

UniProt 02:*

Database

Post-processing: Minimum Match 0% .Maximum Match 100%

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Description	P04626 homo sapien O18735 canis famil	Q8k3f9 rattus norv Q6p732 rattus norv	Aah61863 rattus no P06494 rattus norv		Vezpeo mus musculu Bac98297 mus muscu	Q8c0e7 m mus muscu	Q9qx70 rattus norv		0	Q8mil8 sus scrofa	mus		Q15303 homo sapien	Qedaze Iattus norv Aad77349 rattus no	078zf7 brachydanio	Q6ua29 rattus norv	Aaq77348 rattus no	Q6vga3 brachydanio	Aaq91602 brachydan	Q62956 rattus norv	Q6xjv8 xiphophorus	_	xiphop	Q9w6f6 gallus gall	i shoul
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Protein kinase.
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GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW 1200
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R GO; GO:0016620; C:membrane; IEA.

R GO; GO:0016620; F:ATP binding; IEA.

R GO; GO:0016740; F:transferase activity; IEA.

R GO; GO:0016740; F:transferase activity; IEA.

R GO; GO:0016740; F:transferase activity; IEA.

R GO; GO:001669; P:protein amino acid phosphorylation; IEA.

R GO; GO:001669; P:transferase activity; IEA.

R GO; GO:001669; P:transferase activity; IEA.

R GO; GO:001669; P:transferase activity; IEA.

R GO; GO:00169; P:transferase activity; IEA.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000404; EGFR_L.

R InterPro; IPR001090; Rinase like.

R InterPro; IPR00109; Rinase like.

R InterPro; IPR001090; Recep L. domain; 2.

R Fam; PR00109; Proc. Kinase; 1.

R Fam; PR00109; Proc. Kinase; 1.

R Fam; PR00109; Proc. Kinase; 1.

R PROSITE; PR00109; PROTEIN KINASE AFP; 1.

R PROSITE; PR00109; PROTEIN KINASE AFP; 1.

R PROSITE; PR00109; PROTEIN KINASE PROX; 1.
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Carnivora, Pissipedia, Canidae, Canis.
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HSSP; P04626; 1N8Z.
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                                                                                                                                                                            QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
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                                                                                                                                                                                                                                                                                                                                              CELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEVT
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                                                              Score 6688; DB: Pred. No. 0;
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                                                                                                          Conservative
                                                                                    Best Local Similarity
Matches 1230; Conserv
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         103 ODPSPLORYSEDPTVPLPPETDGKVAPLTCSPOPEYVNOPEVWPOPPLALEGPLPPSRPA 1162
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                                                      GATLER----AKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFD
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SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SUBMILTED MAY-2002) to the EMBL/GenBank/DDBJ databases.

EMBL, AN166421, AAM50093.1; -..

REMBL, AN166422, AAM50093.1; -..

REMBL, AN166429. C. membrane; IEA.

GO; GO:000524; F:ATP binding; IEA.

GO; GO:000524; F:ATP binding; IEA.

GO; GO:000506; F:equidermal growth factor receptor activity; IEA.

GO; GO:0007469; F:transferase activity; IEA.

GO; GO:0007469; F:transferase activity; IEA.

GO; GO:0007469; P:transferase activity; IEA.

InterPro; IPR002030; Kinase like.

InterPro; IPR003030; Rinase like.

InterPro; IPR003040; YIV_Pixinase.

InterPro; IPR004049; Pro; Pixinase.

InterPro; IPR004049; Pro; Pixinase.

InterPro; IPR004049; Pro; Pixinase.

InterPro; IPR004049; IVI_Pixinase.

INTERPRO; IVIIIIIIIIIIIIIIIIIIIIIIIIIIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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Last sequence update)
Last annotation update)
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88.0%; Pred. No. 7.8e-299;
ive 50; Mismatches 97;
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                                                                                                                                                                                                                                                                                                                         Q8K3F9;
01-OCT-2002 (TrEMBLrel. 22,
01-OCT-2002 (TrEMBLrel. 22,
01-MAR-2004 (TrEMBLrel. 26,
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Matches 1085; Conservative
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Rattus norvegicus (Rat).
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VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
                                                                                                                                                                                                                                                       CWGESSEDCOSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSGI
                                                                                                                                                                                                                                                                                 CELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEVT
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MA Altachul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Altachul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Diatchenko L., Marueina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Uddin T.B., Toshiyuki S., Carninoi P., Prange C., Brownstein M.J., Uddin T.B., Toshiyuki S., Carninoi P., Prange C., Brownstein M.J., Uddin T.B., Toshiyuki S., Carninoi P., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worlley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Pahey J., Helton E., Ketteman M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Shein J.E., Anstra M.A., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A., Touchman A., Young M.C., Shalska U., Marsa M.A., Sandra S., Sandra S., Marra M.A., Touchman A., Touchman J.W., Green E.D., Dickson M.C., Schnerch A., Schein J.E., Green E.D., Myers R.M., Garein J.E., Green E.D., Myers R.M., Schein J.E., Green E.D., Myers R.M., Green J.B., Myers R.M., Garein J.E., Angeneration and initial analysis of more than 15,000 full-length human and mouse CDA sequences.
                                                                                                                                                                                                                                                                                        Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.

R EMBL; BCO61863; AAH61863.1; -.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR006211; Furin_1ike.

R InterPro; IPR0003030; Grow_Fac_recept.

R InterPro; IPR0003030; Grow_Fac_recept.

R InterPro; IPR0003030; Grow_Fac_recept.

R InterPro; IPR0001295; Furin_thase.

R InterPro; IPR0001295; Furin_thase.

R InterPro; IPR0001295; Tyr_Dkinase.

R InterPro; IPR0001295; Tyr_Dkinase.

R InterPro; IPR0001295; Tyr_Dkinase.

R InterPro; IPR0001019; YuP_moitf.

P Ffam; PR00057; Furin-1ike; 1.

R Pfam; PR00050; Furin-1ike; 1.

R Pfam; PR00109; PRINTSE.

R SMART; SM00219; TYRKINASE.

R SMART; SM00219; TYRK; 1.

R SMART; SM00219; TYRK; 1.

R SMART; SM00219; TYRK; 1.

R PROSITE; PS00107; PROTEIN_KINASE_TYR; 1.

R PROSITE; PS00107; PR0TEIN_KINASE_TYR; 1.
                                                                                                                                                                            05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
V-erb-b.2 erythroblastic leukemia viral oncogene homolog
Name=Erbb2;
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    RSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGS
                                                                                            RCWGESSEDCOSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSG
                                                                                                                                                                                 ICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEV
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TISSUE=Prostate;

X Strausberg R.L., Fealgold E.A., Grouse L.H., Derge J.G.,

RALLINE=22389257; PubMed=12477932;

X Strausberg R.L., Fealgold E.A., Grouse L.H., Derge J.G.,

RALLINE=22389257; PubMed=12477932;

RALLINE R.D., Collins F.S., Wagner L., Schemen C.M., Schuler G.D.,

RALLINE R.F., Jorden H., Moore T., Max S.I., Wang J., Hsieh F.,

RALLINE R.F., Jorden H., Moore T., Max S.I., Wang J., Hsieh F.,

RALLINE R.S., Loguelland R., Farmer A.A., Rubin G.M., Hong L.,

RALLINE R.S., Loguelland N.B., Toshiyuki S., Carninci P., Prange C.,

RALLINE S.S., Loguelland N.B., Peters G.J., Abramson R.D., Mullahy S.J.,

RALLINE S.S., Loguelland N.B., Refers G.J., Abramson R.D., Mullahy S.J.,

RALLINE S.S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

RALLINE R.M., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

RALLINE R.M., Ralska U., Schmutz J., Myers R.M., Butterfield Y.S.,

RALLINE R.M., Marra M.A.;

RALLINE R.M., Respective R.M., Schmutz J., Myers R.M., Butterfield Y.S.,

RALLINE R.M., Ralska U., Smailus D.E., Schmerch A., Schein J.E.,

RALLINE R.M., Ralling R
                            AHRRHRSSSTRSGGGELTLGLEPSEEGPPRSPLAPSEGAGSDVFDGDLAMGVTKGLQSLS
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                                                                                               1080 THDPSPLORYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARP
                                                                                                                      AGATLERPKTLSPGKNGVVXDVFAFGGAVENPEYLVPREGTASPPHPSPAFSPAFDNLYY
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
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02-WAR-2004 (TrEMBLrel. 27, Last sequence update)
02-WAR-2004 (TrEMBLrel. 27, Last annotation update)
V-erb-b2 erythroblastic leukemia viral oncogene homolog 2.
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Pred. No. 1.3e-298;
0: Mismatches 98; Indels
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SEQUENCE 1259 AA; 139071 MW; 10746819C22BE802 CRC64;
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Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                 WDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
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87.9%;
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Best Local Similarity 87.9
Matches 1084; Conservative
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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                      RSLTBILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGS
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                                                                        Gaps
                                                                     1;
                    Length 1259;
                                                                   Indels
                       DB 2;
                                                                        98;
                  Score 5895.5; DB 2
Pred. No. 1.3e-298;
50; Mismatches 98;
                  88.1%;
                                                                   Conservative
               Query Match
Best Local Similarity
Matches 1084; Conserv
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REUCTURE BY NAR OF 650-668.

RETRUCTURE BY NAR OF 650-668.

WAS Gullick W.J., Bottomley A.C., Lofts F.J., Doak D.G., Mulvey D., Mewman R., Crumpton M.J., Sternberg M.J.E., Campbell I.D.;

Newman R., Crumpton M.J., Sternberg M.J.E., Campbell I.D.;

Newman R., Crumpton M.J., Sternberg M.J.E., Campbell I.D.;

Three dimensional structure of the transmembrane region of the proton oncogenic and oncogenic forms of the neu protein.";

EMBO J. 11:43-48(1992).

-I FUNCTION: Essential component of a neuregulin-receptor complex, althought neuregulin do not interact with it alone. GP30 is a potential ligand for this receptor. Not activated by EGF, TGF-alpha and amphiregulin.

-I CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein tyrosine phosphate.

-I SUBUNIT: Heterodimer with each of the other ERBB receptors. The constitutively activated oncogenic variant forms a homodimer.

-I SUBCELLULAR LOCATION: Type I membrane protein.

-I SUBCELLULAR LOCATION: Type I membrane protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor receptor-related
                                                                                                                                                                                            01-JAN-1988 (Rel. 06, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
01-OCT-2004 (Rel. 45, Last annotation update)
Receptor protein-tyrosine kinase erbB-2 precursor (EC 2.7.1.112)
(p185erbB2) (NEV proto-oncogene) (C-erbB-2) (Epidermal growth factor receptor-related protein).
                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Merazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Sciatic nerve;
MEDLINE-9122566; PubMed=2025425;
Lai C., Lemke G.;
Tan extended family of protein-tyrosine kinase genes differentially expressed in the vertebrate nervous system.";
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growth
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Bargmann C.I., Hung M.-C., Weinberg R.A
"The neu oncogene encodes an epidermal
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PIR; A24562; TVRTNU.
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InterPro; IPR006211; Purin-like.
InterPro; IPR006212; Furin_repeat.
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PDB; 111J; NMR; A=647-681.
PDB; 1N8Y; X-ray; C=23-631.
RGD; 2561; Erbb2.
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                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus (Rat)
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TISSUE=Neuroblastoma;
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  R InterPro; IPR0009030; Grow_fac_recept.

R InterPro; IPR001009; Kinase like.

InterPro; IPR001245; Tyr_Lxinase.

R InterPro; IPR001245; Tyr_Dkinase.

R InterPro; IPR001245; Tyr_Dkinase.

R InterPro; IPR001245; Tyr_Dkinase.

R Pfam; PF0075; Furin-like; 1:

R Pfam; PF001009; Furin-like; 1:

R Pfam; PF001009; Furin-like; 1:

R ProDom; PF001009; TyrKINASE.

R PRINTS; PR00109; TyrKINASE.

R PROSTIT; SM00219; TyrK; 1.

R SMART; SM00219; TyrK; 1.

R RRSITE; PS00107; PROTEIN KINASE ATP; 1.

R RRSITE; PS00107; PROTEIN KINASE TYR; 1.

R ROSITE; PS00109; PROTEIN KINASE TYR; 1.

R ROSITE; PS00109; PROTEIN TYRASE TYR; 1.

R RASITE; PS00109; PROTEIN TYRASE TYR; 1.

R ROSITE; PS00109; PROTEIN TYRASE TYR; 1.

R ROSITE; PS00107; PROTEIN TYRASE TYR; 1.
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N-linked (GLNAc. .) (Potential).
N-linked (GLCNAc. .) (Potential).
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                                                                                                                                                                                                                                                                  kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 V -> E (in oncogenic NEU).
138831 MW; 6129264583011402 CRC64;
                                                                                                                                                                                                                                                               Extracellular (Potential).

Extracellular (Potential).

Cytoplasmic (Potential).

Cys-rich.

Cys-rich.

Cys-rich.

Cys-rich.

Cys-rich.

ATP (By similarity).

By similarity.

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Matches 1085; Conservative
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1164 PAGATLERPKTLSPGKNGVVKDVFAFGGAVENDEYLVPREGTASPPHPSPAFSBAFDNLY 1223
                                                                                                                                                                                                                                                                                                                                               MEDLINE=94193007; PubMed=7908275;
Nakamura T., Ushijima T., Ishizaka Y., Nagao M., Arai M., Yamazaki Y.,
Ishikawa T.;
                                                                                                                                                                                                                                                                                                                                                                                         "Cloning and activation of the Syrian hamster neu proto-oncogene.";
Gene 140:251-255(1994).
-!- FUNCTION: Essential component of a neuregulin-receptor complex, althought neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Not activated by EGF, TGF-alpha and amphiregulin (By similarity).
-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
                                                                                                                                                        15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
05-JUL-2004 (Rel. 44, Last annotation update)
Receptor protein-tyrosine kinase erbb-2 precursor (EC 2.7.1.112)
(pl85erbB2) (NEU proto-oncogene) (C-erbb-2).
Name=ERBB2; Syronoyms=NEU;
Name=ERBB2; Syronoyms=NEU;
Name=ERBB2; Syronoyms=NEU;
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom;;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- SUBUNIT: Hererodimer with each of the other ERBB receptors (Potential). Interacts with PRKCABP (By similarity).
-!- SUBCELLULAR LOCATION: Type I membrane protein.
-!- PTM: Ligand-binding increases phosphorylation on tyrosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         residues.
-!- SIMILARITY: Belongs to the EGF receptor family.
                                                      1224 YWDQNSSEQGPPPSNFEGTPTAENPEYLGLDVPV 1257
                                        YWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART; SM00261; FU; 4.
SMART; SM00219; TYFKC; 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR00611; Furin-like.
InterPro; IPR006211; Furin-like.
InterPro; IPR006212; Furin repeat.
InterPro; IPR009030; Grow fac recept.
InterPro; IPR011009; Kinase like.
InterPro; IPR001719; Prot Kinase.
InterPro; IPR001245; Try_Ekinase.
InterPro; IPR008266; Try_Ekinase.
InterPro; IPR008266; Try_Ekinase.
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ProDom; PD000001; Prot kinase; 1.
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Pfam; PF02757; YLP; 2.
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HSSP; P06494; 1N8Y.
                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tyrosine phosphate.
                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. TISSUE=Nerve;
                                                                                                                                                                                                                                                                                                NCBI_TaxID=10036;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
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                                                                                                        Receptor protein-tyrosine kinase erbB-2.
Extracellular (Potential),
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       autocatalysis)
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE: PS00109; PROTEIN KINASE TYR; 1.
ATP-binding; Disease mutation; Glycoprotein; Multigene family;
Phosphorylation; Prote-oncogene; Receptor; Signal; Transferase;
Transmembrane; Tyrosine-protein kinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            V -> E (in oncogenic NEU).
V -> E (in oncogenic NEU).
MW; 974C3791C21F2BE1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-linked (GlonAc...) (N-linked (GlonAc...) (
                                                                                                                                                      Cytoplasmic (Potential)
Cys-rich.
Cys-rich.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88.1%; Score 5894.5; DB 1;
                                                                                                                                                                                                         Protein kinase.

ATP (By similarity).

By similarity.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        similarity)
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                                                                                          Potential.
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Sciurognathi; Muridae; Murinae; Mus
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SMART; SM00220; 3. TKC; 1.
SMART; SM00219; TYRKC; 1.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE DOM; 1.
ATP-binding; Kinase; Transferase.
                                           Mus musculus (Mouse).
Eukaryota, Metazoa, Chordata;
Mammalia, Eutheria; Rodentia;
protein (Fragment)
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Matches 1080; Conservative
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TISSUE=Embryonic tail;
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                                                                                                                                                                                                                                   QVCTGTDMKLRLPASPETHLDMLRHLYQGCQYVQGNLELTYLPTNASLSFLQDIQEVQGY
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                                                                                                                                                                                                                                                                                     61 VLIAHNOVROVPLORLRIVRGTQLFEDNYALAVLDNGDPLNN-TTPVTGASPGGLRELQL
                                                      TISSUB-Embryonic tail;

Okazaki N., Kikuno R., Ohara R., Inamoto S., Koseki H., Hiraoka S., Okazaki N., Kikuno R., Ohara O., Koga H.;

Prediction of the Coding Sequences of Mouse Homologues of KIAA Gene III. The Complete Nucleotide Sequences of 500 Mouse KIAA-homologous CDNAs Identified by Screening of Terminal Sequences of cDNA Clones Bandomly Sampled from Size-fractionated Libraries.";

EMBL; AK129487; BAC98297.1; -.

EMBL; AK129487; BAC98297.1; -.

SEQÜENCE 1305 AA; 143507 MW; A51D897408521860 CRC64;
  Chordata, Craniata, Vertebrata, Buteleostomi, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
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Pred. No. 1.1e-297;
6; Mismatches 96;
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87.6%;
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 Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
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Best Local Similarity
Matches 1080; Conserv
                                             SEQUENCE FROM N.A.
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                                                                LTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANRPED
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BAC98297,
02-MAR-2004 (TrEMBLrel. 27, Created)
02-MAR-2004 (TrEMBLrel. 27, Last sequence update)
02-MAR-2004 (TrEMBLrel. 27, Last sequence update)
MARAA3023 protein (Fragment).
MKIAA3023 Mus musculus (Mouse).
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Pfam; PF01030; Recep L c
Pfam; PF02757; YLP; Z.
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 13 days embryo male testis cDNA, RIKEN full-length
enriched library, clone:6010449F08 product:v-erb-b2 erythroblastic
leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene
homolog (avian), full insert sequence. (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the RIKEN Genome Exploration Research Group Phase I & II Team, "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs."; Nature 420:563-573 (2002).
                                                                                                                                                                                        973 YDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRPFRELVSEFSRWARD
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                    YGCLLDHVREHRGRLGSQDLLNWCVQIAKGMSYLEEVRLVHRDLAARNVLVKSPNHVKIT
                                                                                                                                                                    YDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRMARD
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
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MEDLINE=99279253; PubMed=10349636;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length_cDNA cloning.";
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MEDLINE=21085660; PubMed=11217851;
RIKEN FANTOM Consortium;
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STRAIN=C57BL/6J; TISSUE=Testis;
The FANTOM Consortium,
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Meth. Enzymol. 303:19-44(1999)
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MEDLINE=20499374; PubMed=11042159; Carninci P., Shibata K., Itoh M., Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M., Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Muramatsu M., Hayashizaki Y.; Muramatsu M., Faparahization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes."; Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN=C57BL/6J; TISSUE=Testis;
STRAIN=C97BL/6J; TISSUE=Testis;
Shibata K., Itch M., Aisawa K., Nagaoka S., Sasaki N., Carninci P., A MeDilune=20130913; Pubm6d=11076861;
A Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itch M., Sumi N., Ishiin Y., Makamura S., Hazama M., Nishine T., Harada A., Sumi N., Ishiin Y., Makamura S., Ikegami T., Kashiwagi K., A Yamamotoo R., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., A Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., A Okazaki Y., Muxamatsu M., Inoue Y., Kira A., Hayashizaki Y.;
RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";
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SEQUENCE FROM N.A.

C STRAIN-CC7BL/G6; TISSUE-Testis;
A Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P., Arkuda S., Furuno M., Hanagaki T., Hara A., Haabizume W.,
A Horis F., Imorani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Horis F., Imorani K., Ishii Y., Kono H., Kasukawa T.,
A Katoh H., Kawai J., Kojima Y., Kono S., Kono H., Kouda M., Koya S.,
A Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
A Nishii K., Nomura K., Numazaki R., Ohno M., Ohasto N., Okazaki Y.,
Saito R., Satich H., Sakai C., Sakai K., Sakazume N., Sano H.,
Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
A Tagawa A., Takhashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
BSBI; AK031542; BAC27442.1; -.
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RGO; GO:0004552; P:heart development; IMP.

RGO; GO:0004552; P:myelination; IMP.

RGO; GO:000742; P:myelination; IMP.

RGO; GO:000742; P:myelination; IMP.

RINterPro; IPR000494; EGFR_L.

RINterPro; IPR000512; Furin repeat.

RINterPro; IPR000512; Furin repeat.

RINterPro; IPR001093; Kinase Ilke.

RINterPro; IPR0010145; Tyr_Dkinase.

RINterPro; IPR008264; Tyr_Dkinase_AS.

RINterPro; IPR009264; Tyr_Dkinase_AS.

RINterPro; IPR009199; YLP_motif.
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PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
ATP-binding; Kinase; Transferase; Tyrosine-protein kinase.
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ProDom; PD000001; Prot_kinase; 1.
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121 SLTELLKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRS-RACHPCSPMCKGS 179
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                                                                                                                                                                                                                                                                                                                                                    HSSP; Q9HZO; LMIT,

CQ; GO:0016020; C.membrane; IEA.

CQ; GO:0016524; F.ATP binding; IEA.

CQ; GO:0005504; F.ATP binding; IEA.

CQ; GO:0005006; F:epidermal growth factor receptor activity; IEA.

CQ; GO:0005006; F:epidermal growth factor receptor activity; IEA.

CQ; GO:0005006; F:epidermal growth factor receptor activity; IEA.

CQ; GO:0006108; P:electron transport; IEA.

CQ; GO:0006118; P:electron transport; IEA.

CQ; GO:0006118; P:electron transport; IEA.

CQ; GO:0007169; P:transferace activity; IEA.

CQ; GO:0007169; P:transferace; III.

CQ; GO:0007169; P:transferace; III.

CQ; GO:0007169; P:transferace; III.

CQ; GO:0007169; P:transferace; III.

CQ; GO:0007169; P:transferace; Tyrosine-protein kinase.

CQ; GO:00071600716; P:transferace; Tyrosine-protein kinase.

CQ; GO:00071600716; P:transferace; Tyrosine-protein kinase.

CQ; GO:000071600716; P:transferace; Tyrosine-protein kinase.

CQ; GO:000071600716; P:transferace; Tyrosine-protein kinase.

CQ; GO:000071600716; P:transferace; Tyrosine-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .; IEA.
                      Earp H.S.;

"A trunnated, secreted form of the epidermal growth factor receptor is encoded by an alternatively spliced transcript in normal rat tissue."; Mol. Cell. Biol. 10:2973-2982(1990).
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    Petch L.A., Harris J., Raymond V.W., Blasband A.J., Lee D.C.,
                                                                                                                                                                                                                                                             Petch L.A.;
Submitted (NOV-1991) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                      STRAIN=Fisher; TISSUB=Liver;
Guttridge K., Dawson T.L., Earp H.S.;
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=Fisher; TISSUE=Liver;
                                                                                                                                                                                                                                                                                                    EMBL; M37394; AAF14008.1;
PIR; A36325; A36325.
HSSP; Q9H2C9; 1M17.
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                                                                                181 VRGKHCLPCHPECQPQNSSETCYGSEADQCEACAHYKDSSSCVARCPSGVKPDLSYMPIW 240
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                                                                                                                                         532 VNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIW 591
                                                                                                                                                                                                                     KPPDEEGACOPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLGVVFGIL 651
                                                                                                                                                                                                                                                                                                    652 IKRRQOKIRKYTWRRILLQETELVEPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTV 711
                                                                                                                                                                                                                                                                                                                                                                                 712 YKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVSRLLGICLTSTV 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                QLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQLAKGMSYLEDVRLVHRDLAARNVLVK 831
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                                                            HTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREY
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
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Last annotation update)
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01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last seq
01-MAR-2004 (TrEMBLrel. 26, Last ann
Epidermal growth factor receptor.
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STRAIN-Fisher; TISSUE-Liver;
MEDLINE-90258888; PubMed-2342466;
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SEQUENCE FROM N.A.

STRAIN=C57BL/6; TISSUE=Brain;

MEDLINE=22388257; PubMed=1247932;

MEDLINE=22388257; PubMed=1247932;

MEDLINE=22388257; PubMed=1247932;

MISCHINI S.P., Zebeberg B., Buerow K.H., Schemen C.M., Schuler G.D.,

Altschul S.F., Zebeberg B., Buerow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Mang J., Heishe F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M., Sacres M.B., Bonaldo M.F., Casrainci P., Prange C.

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Rosak S.A., McEwan P.J., McKernan R.J., Malke J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Richards S., Worley W., Sodergren E.J., Lu X., Gibbs R.A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Mithing M., Madan A., Young A.C., Schwutz J., Myers R.M., Butterfield Y.S.,

Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

Jones S.J., Marra M.A.,

"Generation and initial analysis of more than 15,000 full-length human
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                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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GO:00075507; P:heart development; IMP.
GO: GO:0042552; P:myelination; IMP.
GO; GO:0007422; P:peripheral nervous system development; IMP.
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Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 682B188EB0E71318 CRC64;
Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
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InterPro; IPR006211; Furin-like.
InterPro; IPR006212; Furin repeat.
InterPro; IPR009030; Grow Fac_recept.
Pfam; PF00757; Furin-like; 1.
Pfam; PF01030; Recept_Lomain; 2.
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STRAIN=C57BL/6; TISSUE=Brain;
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EMBL; BC053078; AA453078.1;
HSSP; P06494; 1N8Y.
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 01-JUN-2003 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
05-JUL-2004 (TrEMBLrel.
                                                                                             Mus musculus (Mouse)
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                                                       Erbb2 protein.
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                                                                                               377 KGDSFTRTPPLDPRELEILKTVKEITGFLLIQAWPENWTDLHAFENLEIIRGRTKQHGQF
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                                                                                                                                          DGDPASNTAPLOPEQLOVFETLEEITGYLYISAWPDSLPDLSVFQNLOVIRGRILHNGAY
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                                                                       264 ICELHCPALITYNTDTFESMLNPEGRYTFGASCVTTCPYNYLSTEVGSCTLVCPPNNQEV 323
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MEDLINE=84219729; PubMed=6328312;
Ulfrich A., Couseens L., Hayflick J.S., Dull T.J., Gray A., Tam A.W.,
Lee J., Yarden Y., Libermann T.A., Schlessinger J., Downward J.,
Mayes B.L.V., Whittle N., Waterfield M.D., Seeburg P.H.;
"Human epidermal growth factor receptor cDNA sequence and aberrant
expression of the amplified gene in A431 epidermoid carcinoma cells.";
RSLTEILKGGVLIRGNPQLCYQDMVLWKDVLRKNNQLAPVDMDTNRSRACPPCAPTCKDN
                              204 HCWGESPEDCQILTGTICTSGCARCKGRLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSG
                                                                                                      TAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFD
                                                                                                                  GDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQNLQVIRGRILHNGAYS
                                                                                                                                                          LTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANRPED
                                                                                                                                                                                                  480 BCVGEGLACHOLCARGHCWGPGPTOCVNCSOFLRGGECVEBCRVLOGLPREYVNARHCLP
                                                                                                                                                                                                                                                504 ACGLEGLVCNSLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVWKGLPREYVRGKHCLP
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                                                            240 ICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEV
                                                                                                                                                                                                                                                                                                                                                                                                                                             P00533; 000688; 000732; P06268; 014225; Q92795; Q9BZS2; Q9GZX1; Q9H2C9; Q9H3C9; Q9H3C9; Q9UMD8; Q9UMG5; 21-JUL-1986 (Rel. 01, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 01-OCT-2004 (Rel. 45, Last annotation update) Epidermal growth factor receptor precursor (EC 2.7.1.112) (Receptor protein-tyrosine kinase ErbB-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Buteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ilekis J.V., Stark B.C., Scoccia B.; "Possible role of variant RNA transcripts in the regulation of epidermal growth factor receptor expression in human placenta.";
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Mammalia; Eutheria; Primates;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=EGFR; Synonyms=ERBB1
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SEQUENCE FROM N.A. (ISOFORM 1), AND VARIANTS GLN-98; ARG-266; LYS-521; ILE-674; GLY-962 AND PRO-988.

Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.N., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S., Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.; Parlyronmental genome project, NIEHS ES19478, Department of Genome Sciences, Seattle, WA (URL: http://egp.gs.washington.edu)."; Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Reiter J.L., Threadgill D.W., Eley G.D., Strunk K.E., Danielsen A.J., Schehl Sinclair C., Pearsall R.S., Green P.J., Yee D., Lampland A.L., Balasubramaniam S., Crossley T.D., Magnuson T.R., James C.D.,
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MEDLINE=84245835; PubMed=63130563;
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Haley J.D., Whittle N., Bennett P.,
Waterfield M.D.;
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MEDLINE-84196372; PubMed-6326261;
PubMed=8918811;
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Best Local Similarity 49.9%; Pro
Matches 624; Conservative 177;
                                                                                                                                                                INTERACTION WITH CBL.
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Kohda D.;
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657 QKIRKYTWRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTVYKGIW 716
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Pred. No. 6.6e-156;
7; Mismatches 345;
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	89 VLIALNTVERIPLENLQIIRGNMYYENSYALAVLSNYDANKTGLKELPMR 138	121 SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSFMCKGSR 180	181 CWGESSEDCQSLTRIVCAGGCA-RCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHPNHSG 239	240 ICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEV 299	300 TAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFD 359 110 - III	360	420 LTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANRPED 479	480 ECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLP 539 498 SCKATGQVCHALCSPEGCWGPEPRDCVSCRNVSRGRECVDKCNLLEGEPREFVENSECIQ 557	540 CHPECQPONGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGA 599	600 COPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLGVVFGILIKRRQ 656 617 CHLCHPNCTYGCTGPGLEGCPTNGPKIPSIATGMVGALLLLLVVALGIGLFMRRR 671	657 QKIRKYTWRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTVYKGIW 716 	717 IPDGENVKIPVAIKVLRENTSPKANKEILDEAYWAGVGSPYVSRLLGICLTSTVQLVTQ 776 :	777 IMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHV 836	837 KITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFG 	897 AKPYDGIPAREIPDLIEKGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRM 956 	957 ARDPQRFVVIQ-NEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPG 1015	1016 AGGWVHHRHRSSSTRSGGGDLTLGLEPSEEBAPRSPLAPSEGAGSDVFDGDLGMGAAKGL 1075	1076 QSLPTHDPSPLQRYSBDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGP 1133	1134 LPAARPAGATLERAKTLSPCKNGVVKDVFAFCGAVENPEYL-TPQGGAAPQPHPPAFSP 1192 :
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	DD 672 HIVRKRILKRILQERELVEPLTPSGEAPNQALLRILKETEFKKIKVLGSGAFGTVYKGLM 731	Qy 717 IPDGENVKIPVAIKVLRENTSPKANKEILDEAVVMAGVGSPYVSRLLGICLTSTVQLVTQ 776	QY 777 LMPYGCLLDHVRENRGRLGSQDLLAWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHV 836 DD 792 LMPFGCLLDYVREHKDNIGSQYLLAWCVQIAKGMNYLEDRRLVHRDLAARNVLVKTPQHV 851	Qy 837 KITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFG 896	QY 897 AKDYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRM 956 :	Qy 957 ARDPQRFVVIQ-NEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEXLVPQQGFFCPDFAPG 1015 Db 972 ARDPQRYLVIQGDERWHLPSPTDSNFYRALMDEEDMDDVVDADEYLIPQQGFF 1024	OY 1016 AGGWVHHRHRSSSTRSGGGDLTLGLEPSEEBAPRSPLAPSEGAGSDVFDGDLGMGAAKGL 1075	QY 1076 QSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSFRGF 1133	QY 1134 LPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEXL-TPQGGAAPQPHPPPAFSP 1192 1109 VYHNQPLNPAPSKDPHYQDPHSTAVGNPEXLNTVQPTCVNS 1149	QY 1193 AFDNLYYMDQDPPERGAPPSTFKGTPTAENPEYL 1226 DD	RESULT 14 AASB3109 PRELIMINARY: PRT: 1210 AA.	AAS83109; 14-ARR-2004 (TrEMBLrel. 27, Created) 14-ARR-2004 (TrEMBLrel. 27, Last sequence 14-ARR-2004 (TrEMRI.rel) 27, Last annotation	Epidermal growth factor (V-erb-b) oncogene homol	OS Homo sapiens (Human). OS Homo sapiens (Human). OC Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. OX NCBI_TaxID=9606;	0, ,, ,, ,		47.1%; Score 3155; DB 2; Length 1210; Similarity 49.9%; Pred No. 6.6e-156; A. Conservative 177. Mismatches 246; Indels 100. Gang 20.	1 QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDLQEVQGY 6	61 VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR

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completed: January 25, 2005, 21:29:00 le : 174.437 secs
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InterPro; IPR0000345; CytC Mem BS.

InterPro; IPR0000345; CytC Mem BS.

InterPro; IPR0000319; GytC Mem BS.

InterPro; IPR0000310; Grow Fac recept.

InterPro; IPR0000310; Grow Fac recept.

InterPro; IPR0000310; Grow Fac recept.

InterPro; IPR0000310; Prot Kinase.

InterPro; IPR0001245; Tyr Dkinase.

INTERPRO; IPR00001; Prot Kinase; I.

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IPR00101; PR00101; PR0010
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Sus.
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GO:0005524; F:ATP binding; IEA.
GO:000506; F:epidermal growth factor receptor activity; IEA.
GO:0004872; F:receptor activity; IEA.
GO:0016440; F:transferase activity; IEA.
GO:0016468; P:protein amino acid phosphorylation; IEA.
GO:0001169; P:transmembrane receptor protein tyrosine kin..
-----PERGAPPSTFKGTPTAENPEYL 1226
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                       Kim J.G., Vallet J.L., Nonneman D., Christenson R.K.;
Submitted (UUN-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AVIT054; AAM7472.1;
HSSP; Q9H2C9; UMI'
GO; GO:0016020; C:membrane; IEA.
GO; GO:0016020; F:arp binding; IEA.
GO; GO:001524; F:Arp binding; IEA.
GO; GO:001574; F:Arp binding; IEA.
GO; GO:001574; F:Arp binding; IEA.
GO; GO:0016740; F:transferase activity; IEA.
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01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-0CT-2004 (TrEMBLrel. 26, Last sequence update)
Epidernal growth factor receptor.
Sus scrofa (Pig).
Eustaryota, Metazoa, Chordata, Craniata, Vertebrata, Mammalia, Eutheria; Cetartiodactyla, Suina; Suidae, NCBI_TAXID=9823;
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DPORFVVIQ-NEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAG 1017
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                                                                                                                                   LTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANRPED 479
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                        ECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLP
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                                                                                                                                                                                                              GDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQNLQVIRGRILHNGAYS
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ADE3281
ADE45198
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ADJ66554
ADJ66554
ADJ66554
ADJ7193
ADJ317193
ADJ318613
ADJ318613
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/label= N-terminal
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Human tyr
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Human erb
Human erb
Human mal
Human RE
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Aab60167 HER2 tran
                                                  January 25, 2005, 21:08:29 ; Search time 131.275 Seconds (without alignments) 3366.641 Million cell updates/sec
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                                                                                          6694
1 QVCTGTDMKLRLPASPETHL.....TFKGTPTAENPEYLGLDVPV 1232
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Aae12130
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Aau74545
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Aam51143 B
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       5.1.6
Compugen Ltd.
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                                                                                                                                        2002273 seqs, 358729299 residues
                                                                                  US-09-806-703A-4_COPY_24_1255
      GenCore version
Copyright (c) 1993 - 2005
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Maximum Match 100%
Listing first 45 summaries
                                    - protein search, using sw model
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ABR47447
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Gapop 10.0 , Gapext 0.5
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1: geneseqp1980s:*

2: geneseqp2000s:*

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immune responses to weakly immunogenic, tumor associated peptide for the treatment of breast and prostate cancer.
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165. .479
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6151- Tyrosine_kinase_domain
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                HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
                                                                     HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPSTVNQPDVRPQPPSPREGPLPAARPA
                                                                                                                    GATLERAKTLS PGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW
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tive 0; Mismatches
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 Gapa
                                                                                                                                                                                                                                        Therapeutic compound; major histocompatibility complex; vaccine; antigenic peptide; MHC; immunoregulatory; immune response; HER-2; adoptive immunotherapy; anti-cancer; breast cancer antigen; APC; antigen presenting cell; human; tyrosine kinase-type receptor.
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ive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inducing or enhancing an immune response against an antigen, particularly cytotoxic T-lymphocyte responses, for treating or ameliorating prostate or breast cancer, comprises administering the antigen formulated with chitosan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a method for inducing or enhancing an immune response against a polypeptide antigen in an animal, including human. The method comprises administering the polypeptide antigen or at least one variant which includes at least one first T-helper cell epitope that is foreign to the animal (foreign TH epitope) and is formulated with chitosan. The polypeptide antigen is weakly immunogenic or non-immunogenic. The invention is used as vaccine. The chitosan and polypeptide antigen or its variant are useful in the preparation of an immunogenic composition for inducing or enhancing an immune response, particularly CTL response, against the polypeptide or protein antigen. The method for inducing or enhancing an immune response is useful in treating or ameliorating cancer, e.g. prostate or breast cancer. The present sequence is human Herz antigen
                                                                                                                                                           Human; immune response; T-helper cell epitope; chitosan; CTL response;
vaccine; prostate cancer; breast cancer; Her2 antigen; cytostatic;
immunostimulant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1255;
                                                                                                                                                                                                                                                                        /note= "Mature human Her2 antigen"
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100.0%; Score 6694;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1232; Conservative 0; Mismatches
      DODPPERGAPPSTFKGTPTAENPEYLGLDVPV
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/label= Signal_peptide
24. .1255
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03-NOV-2000; 2000US-0245166P.
18-JUN-2001; 2001DK-00000936.
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                                                                                standard;
                                                                                                                                             Human Her2 antigen
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Gaps

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QRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGWV 1043
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                                                                      QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
                                                                                                                     VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
                                                                                                                                                                                      SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
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                                                   QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
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Best Local Similarity 100.
Matches 1232; Conservative
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                                                                                                                                                                                                                                                                                                                                Human; HER2; ErbB; epidermal growth factor receptor; receptor; anti-ErbB antibody-maytansinoid conjugate; cancer; tumour; breast; ovary; stomach; endometrium; salivary gland; lung; kidney; colon; colorectum; thyroid; pancreas; prostate; bladder; ErbB2; neuronal disorder; glial disorder; astrocytal disorder; hypothalamic disorder; glandular disorder; macrophagal disorder; epithelial disorder; stromal disorder; inflammatory disorder; angiogenic disorder; inflammatory disorder;
                                     GATLERAKTLSPGKNGVVKDVFAFGGAVENPRYLTPQGGAAPQPHPPPAFSPAFDNLYYW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Treating tumor characterized by overexpression of epidermal growth far receptor, ErbB or cancer in mammal, comprises administering anti-ErbB antibody-maytansinoid conjugate to the mammal.
                                                                                 DQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
                                                                                                      Sliwkowski M;
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                                                                                                                                                                                                                                                                                                      Human HER2 (ErbB2) polypeptide.
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SLIWKOWSKI M.
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N-PSDB; ABK14058.
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100.0%; Score 6694;

Query Match

Length 1255;

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The present invention describes a method for assessing whether a patient is afflicted with breast cancer. The method comprises comparing the level of expression of a marker (gene/polypeptide see ACCS0076 to ACCS0314 and ABR47386 to ABR47632) in a patient sample and the normal level of expression of the marker in a control non-breast cancer sample, where a significant increase in the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with breast cancer. The breast cancer associated sequences from the present invention have cytostatic activities and can be used in gene therapy. The method is useful for diagnosing and treating breast cancer. N.B. The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Breast cancer diagnosis or treatment by comparing the level of expression of a marker in a patient sample with that in the control non-breast cancer sample.
                                              GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW
HHRHRSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
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Mills GB;
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Sahin A, N
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                                                                                                                                                                                                                                                                                                                                cancer associated protein sequence SEQ ID
                                                                                                                                                         DODPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
                                                                                                                                          DODPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
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Query Match

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes an isolated epitope (I) and an epitope cluster. Also described is a vaccine or immunotherapeutic composition (VC) comprising (I). (I) has cytostatic activity. VC is useful for treating an animal, by administering to an animal the vaccine or immunotherapeutic composition. VC is also useful for evaluating immunotherapeutic composition. VC is also useful for evaluating immunotericity of a vaccine or immunotherapeutic composition, by administering VC to an HLA-transgenic animal and evaluating immunogenicity based on a characteristic of the animal, or by in vitro primary stimulation of a T cell and evaluating immunogenicity. (I) is useful for determining specific T cell frequency, by contacting T cells with a MHC-peptide complex, and further comprises ELISPOT analysis. Ill miting dilution analysis, flow cytometry, in situ hybridisation analysis, flow cytometry in situ hybridisation analysis. Subjymerase chain reaction (PCR) and ABQ8381 to ABQ83858 and ABD74128 to ABD74111 represent sequences used in the exemplification of the present
                    1103
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                                                                                                                                  Human, epitope; vaccine; immunotherapeutic; cytostatic; immunogenicity;
T cell; chromosome 17q21-q22.
HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
                                                                                                                GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW
                                                HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
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07-MAR-2002; 2002US-0363210P.
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                                                                                    CELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEVT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A composition for diagnosing, preventing or treating disorders characterized by ErbB2 overexpression (e.g. breast cancer) comprises an ErbB2 binding peptide that binds specifically to the extracellular domain of ErbB2.
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                                       HHRHRSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                           HDPSPLORYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
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100.0%; Score 6694;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1232; Conservative 0; Mismatches
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SLTEILKGGVLIQRNPQLCYQDTILMKDIFHRRNNQLALTLIDTNRSRACHPCSPMCKGSR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This invention relates to a novel medical method comprising providing an implantable microscopic device including a nanostructure provided with a light light of the microscopic device is a light of a predetermined chemical or molecular site. Specifically, the microscopic device is directly implanted into patients at predetermined sites, and on reaching the tearget site the nanostructure is activated to perform a preselected medical diagnostic or therapeutic function. Accordingly, the present invention describes using this method for the treatment of various illnesses including gout whereby the target is a urea deposit that can be disrupted by activation of the nanostructure, as well as bone injuries and cancer. Furthermore, the target can consist of a microorganism containing a strand of viral DNA, such that heating the nanostructure can destroy the microorganism, which in turn can be used therapeutically to treat HIV patients. This polypeptide sequence is the human erb-B protein that is over expressed in human breast tumour cells and therefore acts as target for a nanostructure of the invention.
GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW 1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Diagnostic or therapeutic method involves inserting medical devices including nanostructures provided with ligand into patient, and attaching nanostructures through ligand to predetermined target structure inside
                                                                                                                                                                                                                                                                                                                                                                                    implantable microscopic device; nanostructure; ligand; gout; bone injury; cancer; HIV; pl; p2; human; erb-B.
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100.0%; Pred. No. 0;
live 0; Mismatches
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                                                                                                                                                                                                      protein; 1255
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Best Local Similarity 100.
Matches 1232; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention describes crystals of a complex (C) of epithelial growth factor (EGFN),

C containing a dimer of a complex of EGFR with EGFR in the molar ratio 1:1.

C Also described: (1) preparation of EGFR which can be crystallised, in high recombinant EGFR is prepared using lec8 cells and then complex of EGFR which can be crystallised, in which recombinant EGFR is prepared using lec8 cells and then complex of EGFR activity regulator (1), in which crystallisable EGFR is contacted with EGF or (1); (3) screening potential crystallisable EGFR is contacted with EGF or (1); (3) screening potential crystallisable EGFR; is contacted with EGF or (1); (3) screening potential crystallisable EGFR; is contacted by the screening method for use as agonists and antagonists of EGFR; (5) screening EGF or EGFR mutants crystallisable EGFR; in the EGFR; (1) screening EGF or EGFR; (2) baying an amino acid mutation in the EGFR dimerisation region or in the EGF-EGFR; interaction site, by comparing their 3D structure of the EGF-EGFR complex; (5) design of epitopes using their 3D structure of the EGF-EGFR complex; (6) preparation of anti-EGF or anti-EGFR antibodies using the EGF-EGFR; (5) design of epitopes using the 3D structure of the EGF-EGFR complex; (6) preparation of anti-EGF or anti-EGFR antibodies using the epitopes identified; (7) anti-EGFR or anti-EGFR antibodies prepared by this method; and (8) polypeptides and their salts containing all or part of the anino acid sequence of the EGFR (1) can be used in the continion of anothers and antagonists of EGFR for use in the definition disorders, ulcers (including stomach ulcer, skin ulcer and ulcer and ulcer anial grow disabetic complications). Parkinson's disease, bone resorption disorders and ringworm. The present sequence represents a human ErbB2 amino acid sequence, which is used in the exemplification of squence which is used in the exemplification of squence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Crystalline complex of epithelial growth factor with its receptor for design of ligands and antibodies to the receptor for treatment of ulcers, cancer and Parkinson's disease.
                                                                                                                                                                                                                                                                                   epithelial growth factor receptor; EGFR, cytostatic, hepatotropic, antiulcer; antidiabetic; dermatological; antiparkinsonian; fungicide; cancer; cancer proliferation; liver function disorder; ulcer; parkinson's disease; bone resorption disorder; ringworm; human; protein co-ordinate data; ErbB2.
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Shinozaki M;
                      DODPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
                                                                                                                                                                                                                                    amino acid sequence SEQ ID NO:5.
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Muramatsu H,
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(MOCH ) MOCHIDA PHARM CO LTD.
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Nakao N,
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polypeptide, e.g. for treating cancer. The polypeptide and HER3 stimulating or activating HER3 receptor. This sequence represents the wild type human HER-2 polypeptide.
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                                                                                                                                      Novel human epidermal growth factor receptor 3 variant as agonist or antagonist of HER3 receptor, for diagnosis/treatment of cells or pathological conditions associated with aberrant expression of heregulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                atic; human epidermal growth factor receptor-3; HER-3; heregulin; tyrosine kinase activity; cancer; receptor.
 HDPSPLORYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
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preventing or treating malignant neoplasia. The disease treated is preferably breast cancer. The present sequence is that of a human malignant neoplasia-related protein which may be used in the method
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                                                         QRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGMV
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                                                                                                                                                                                                                     The present invention describes a polypeptide (I) comprising a component selected from: (a) a polypeptide epitope having any of the 503 fully defined sequences of 8-33 amino acids (SEQ ID NO:108-610); (b) an epitope cluster comprising the polypeptide of (a); (c) a polypeptide having substantial similarity to (a) or (b); (d) a polypeptide having functional similarity to any of (a)-(c); or (e) a nucleic acid encoding the polypeptide of (a)-(d). (I) has vincide and cytostatic activities, and can be used in vaccines. The methods and compositions of the present invention are useful for the diagnosis and/or treatment of viral infections, cancers and tumours. The present sequence is used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                epitope, epitope cluster, virucide, cytostatic, vaccine, viral infection, cancer, tumour, human, Her2-Neu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New polypeptides and encoding nucleic acids that are useful epitopes of target-associated antigens, useful for diagnosing and/or treating viral infections, cancers and tumors.
                                                                                                                                                              1104 HDPSFLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
DGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRMARDP
                           QRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGMV
                                          1044 HHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                                                                                                                                            HDPSPLORYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
                                                                                                                                                                                                    GATLERAKTLSPGKNGVVKDVFAFGGAVENPBYLTPQGGAAPQPHPPPAFSPAFDNLYYW
                                                                                    HHRHRSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                                                                                                                                                                                                                                                              DQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
                                                                                                                                                                                                                                                                             Disclosure; SEQ ID NO 90; 357pp; English.
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PRO polypeptide e.g., PRO69614, PRO71106, or PRO86388 useful for ing an immune related disorder such as systemic lupus erythematosus, atoid arthritis, osteoarthritis, juvenile chronic arthritis or
                                                                                                                                                                                                                                                                                                                                                                                                                         Human, PRO, immune related disorder; systemic lupus erythematosus; rheumatoid arthritis; osteoarthritis; juvenile chronic arthritis; systemic sclerosis; Sjogren's syndrome; vasculitis; sarcoidosis; autoimmune haemolytic anaemia; autoimmune thrombocytopenia; thyroiditis; diabetes mellitus; renal disease; demyelinating disease; central nervous system; peripheral nervous system; peripheral nervous system; peripheral nervous system; chronic polymeuropathy; Guillain-Barre syndrome; chronic inflammatory demyelinating polymeuropathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to human PRO polypeptides and the polynucleotides encoding them. The polypeptides and polynucleotides are useful for treating and diagnosaing immune related disorders in mammals. The immune related disorders in mammals. The immune arthritis, osteoarthritis, juvenile chronic arthritis, systemic sclerosis, Sjogren's syndrome, vasculitis, sarcoidosis, sutcimmune haemolytic anaemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, demyelinating diseases of the central or peripheral nervous system, demyelinating diseases of the duillath-Barre syndrome and chronic inflammatory demyelinating polyneuropathy, polyneuropathy. This sequence represents a human PRO polypeptide of the invention.
                                                                     HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
                  HHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                                                 HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
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N-PSDB; ADO20008.
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Wu TD;
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                                                   SLTEILKGGVIJQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
                                        QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
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ò	1081 HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPBYVNQPDVRPQPPSPREGPLPAARPA 1140
q	1104 HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPBYVNQPDVRPQPPSRRGPLPAARPA 1163
ò	1141 GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW 1200
q	1164 GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW 1223
ò	1201 DODPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
qa	1224 DQDPFERGAPPSTFKGTPTAENPEYLGLDVPV 1255
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Search completed: January 25, 2005, 21:23:17 Job time: 140.275 secs

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GenCore version 5.1.6
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- protein search, using sw model OM protein

Run on:

January 25, 2005, 21:16:15; Search time 36.8376 Seconds (without alignments) 3277.960 Million cell updates/sec

Title: Perfect score: Sequence:

US-09-806-703A-4 6812 1 MELAALCRWGLLLALLPPGA......TFKGTPTAENPEYLGLDVPV 1255

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database:

PIR 79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	protein-tyrosine k	protein-tyrosine k	p-185 precursor -	epidermal growth f				~	kinase-related tra	epidermal growth f	protein-tyrosine k	protein-tyrosine k	epidermal growth f	protein-tyrosine k	kinase-related tra	protein-tyrosine k	protein-tyrosine k	epidermal growth f	protein let-23 [im		protein-tyrosine k	epidermal growth f		epidermal growth f	~	protein-tyrosine k	insulin-like growt	insulin receptor p	insulin receptor p
ΩI	A24571	TVRTNU	148161	GOHUE	A53183	TVCHLV	A47253	S06142	A36223	JC4387	TVFVLV	TVYUH	GQFFE	835745	800727	B44776	TVFVEB	A36325	E88257	870712	870713	A45558	A42032	A27131	S13807	S13808	T43220	INHUR	A36080
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& Query Match	6.66	87.9	87.9	46.5	46.2	45.9	44.1	39.7	35.7	34.4	. 25.9	25.0	24.3	24.5	24.1	23.8	23.8	22.5	19.1	19.1	17.8	17.3	17.0	14.6	11.8	11.1	10.8	10.5	10.4
Score	9089	5988	5984.5	3168	3144	3123.5	3003.5	2701	2431.5	2346.5	1766.5	1703	1652.5	1647	1640	1623	1621	1536	1302	1302	1214	1177	1155	997.5	806.5	754.5	735	718	711
Result No.	1	7	ო	4	S	9	7	80	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

insulin receptor p	insulin receptor-r	protein-tyrosine k	insulin receptor-r	insulin-like growt	insulin-like growt	insulin receptor -	insulin receptor -	insulin receptor (protein-tyrosine k	protein-tyrosine k	tyrosine kinase Mp	protein-tyrosine k	protein-tyrosine k	protein-tyrosine k
A34157 T43212	A36502	T18534	B36502	IGHUR1	A33837	T30346	A56081	S57245	A54092	150612	S49004	805582	833596	A36355
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10.4	10.2	10.1	10.0	9.6	9.4	9.5	9.5	9.1	8.9	8.7	8.7	9.8	8.6	9.6
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Protein-tyrosine kinase (EC 2.7.1.112) erbB2 precursor - human protein-tyrosine kinase (EC 2.7.1.112) erbB2 precursor - human protein erb Protein precursor; kinase-related transforming protein erb C;Species: Homo sapiens (man) C;Date: 25-Oct-1987 #sequence revision 06-Dec-1996 #text change 09-Jul-2004 C;Date: 25-Oct-1987 #sequence revision 06-Dec-1996 #text change 09-Jul-2004 R;Yamamoto, T.; Ikawa, S.; Akiyama, T.; Semba, K.; Nomura, N.; Miyajima, N.; Saito, T.; Nature 319, 230-234, 1986 Similarity of protein encoded by the human c-erb-B-2 gene to epidermal growth A;Reference number: A24571; MUID:86118663; PMID:3003577

A,Molecule type: mRNA A,Residues: 1-1255 cxNa. A,Gross-references: UNIPROT:P04626; GB:X03363; NID:g31197; PIDN:CAA27060.1; PID:g31198 R,Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T. R,Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T. A,Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T. A,Title: A v-erbB-related protooncogene, c-exbB-2, is distinct from the c-exbB-1/epider A,Reference number: A25491; MUID:86016729; PMID:2995967

A;Accession: A25491

A,Molecule type: DNA A,Residues: 737-1031 <SEM>

A;Cross-references: GB:M11767; NID:g182163; PIDN:AAA35808.1; PID:g553282
R;Coussens, L.; Yang-Feng, T.L.; Liao, Y.C.; Chen, E.; Gray, A.; McGrath, J.; Seeburg, Science 230, 1132-1139, 1985
A;Title: Tyrosine kinase receptor with extensive homology to EGF receptor shares chromo A;Reference number: A44188; MUID:86070181; PMID:2999974

A, Accession: A44188

A; Modecule type: DNA
A; Residues: 740-910 <COU1>
A; Cross-references: GB:M12036; NID:g183988; PIDN:AAA35978.1; PID:g183989
A; Accession: B44188
A; Molecule type: mRNA
A; Residues: 1-517, TALL', 522, 'S', 524-654, 'V', 656-1169, 'A', 1171-1255 <COU2>
A; Cross-references: GB:M11730; NID:g183986
A; Cross-references: GB:M11730; NID:g183986
A; Cross-references: GB:M11730; NID:g183986
A; King, C.R.; Kraus, M.H.; Aaxonson, S.A.
A; King, C.R.; Kraus, M.H.; Aaxonson, S.A.
A; King, C.R.; Kraus, M.H.; Paxonson, S.A.
A; Reference number: 159509; MUID:8572597; PMID:2992089

A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: BIL29395; NID:g459807; PIDN:AAA35809.1; PID:g459808
R;Tal, M.; King, C.R.; Kraus, M.H.; Ullrich, A.; Schlessinger, J.; Givol, D.
A;Title: Human HER2 (neu) promocter: evidence for multiple mechanisms for transcriptiona
A;Reference number: IS7622; MUID:87286898; PMID:3039351

A;Status: translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-191 <TAL>

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protein-tyrosine kinase (EC 2.7.1.112) neu precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Accession: 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change 09-Jul-2004
C;Accession: 32-52-30, 1986
R;Bargmann, C.I.; Hung, M.C.; Weinberg, R.A.
A;Title: The neu oncogene encodes an epidermal growth factor receptor-related protein.
A;Reference number: A24562; MUID:86118662; PMID:3945311
A;Reference number: A24562; MUID:86118662; PMID:3945311
A;Residues: 1-1260 cBAR>
A;Coss-references: UNIPROT:P06494; EMBL:X03362; NID:g56745; PIDN:CAA27059.1; PID:g5674*
A;Residues: 12, 1975-19794, 1991
A;Title: Direct DNA sequencing of the rat neu oncogene transmembrane domain reveals no may Reference number: A61204; MUID:92035293; PMID:1682063
A;Accession: A61204
A;Residues: preliminary
A;Residues: DNA
A;Residues: 637-663, VV,665-702 cMAS>
A;Note: authors translated the codon GCA for residue 25 as Val
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                                                    841 LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFT
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                                                                                                                                                         RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSP
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F.2.15.5/Product: protein-tyrosine kinase erbB2 #status predicted <MAT>
F.22-15.5/Product: protein-tyrosine kinase erbB2 #status predicted <MAT>
F.22-15.5/Domain: extracellular #status predicted <EE1>
F.70-10.104/Domain: EGF receptor extracellular domain repeat <EE2>
F.70-10.404/Domain: EGF receptor extracellular domain repeat <EE2>
F.70-15.5/Domain: intracellular #status predicted <TWM>
F.75-10.5/Domain: intracellular #status predicted <TWT>
F.71-10.2.5/Domain: intracellular #status predicted <TWT>
F.71-10.2.5/Domain: protein kinase ATP-binding motif
F.72-734/Region: protein kinase ATP-binding motif
F.76-73/Artive site: phosphate (Thr) (covalent) (by protein kinase C) #status predicted
F.753/Active site: Lys #status predicted
F.753/Active site: Lys #status predicted
F.1139,1221,1222,1248/Binding site: phosphate (Tyr) (covalent) (by autophosphorylation)
                               30
                                                                       A Gene: GDB:ERBB2; NGL; NEU; HER-2
A;Gross-references: GDB:120613; OMIM:164870
A;Gross-references: GDB:120613; OMIM:164870
A;Gross-references: GDB:120613; OMIM:164870
A;Gross-references: GDB:120613; OMIM:164870
A;More: the list of introns is incomplete
C;Function:
A;Description: catalyzes the phosphorylation of a peptidyl tyrosine residue by ATP
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphoprotein; phospho
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A;Cross-references: GB:M16792; NID:g183983; PIDN:AAA58637.1; PID:g553332 C;Comment: Amplification and overexpression of this erbB-related gene occurs
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Pred. No. 1.4e-275;
1; Mismatches 1; Indels 0
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Best Local Similarity 99.8%;
Matches 1253; Conservative 1
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M.; Arai, M.; Yamazaki, Y.; Ishikawa
                                                                                                                                                                                                                                                                                                                                                                                       1950 precursor - golden hamster
C;Species: Mesocricetus auratus (golden hamster)
C;Species: Mesocricetus auratus (golden hamster)
C;Species: Mesocricetus auratus (golden hamster)
C;Date: 0.2-31-1996 #sequence_revision 02-3u1-1996 #text_change 09-Jul-2004
C;Accession: 148161
R;Nakamura, T.; Ushijima, T.; Ishizaka, Y.; Nagao, M.; Arai, M.; Yamazaki, Y.; I
Gene 140, 251-255, 1994
A;Title: Cloning and activation of the Syrian hamster neu proto-oncogene.
A;Reference number: 148161; MUID:94193007; PMID:7908275
A;Accession: 148161
A;Molecule type: mRNA
A;Residues: 1-1254 <RES>
A;Cross-references: UNIPROT:Q60553; GB:D16295; NID:g493236; PIDN:BAA03801.1; PII
C;Genetics:
A;Gene: neu
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP
F;718-983/Domain: protein kinase homology <KIN>
F;726-734/Region: protein kinase ATP-binding motif
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          F.723-988/Domain: protein kinase homology «KIN»
F.731-798/Region: protein kinase ATP-binding motif
F.711-191,263,535,576,634/Binding site: carbohydrate (Asn) (covalent) #status
F.631/Binding site: phosphate (Thr) (covalent) #status predicted
F.758/Active site: Lys #status predicted (Tyr) (covalent) #status predicted
F.882,1227,1253/Binding site: phosphate (Tyr) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                ELRKVKVLGSGAFGTVYKGIWI PDGENVKI PVA I KVLRENTS PKANKE I LDEAYVMAGVG
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                                                                                                                      Length 1260;
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   658-680/Domain: transmembrane #status predicted <TMN>
                                                                                                                   ; Score 5988; DB 1;
; Pred. No. 1.3e-241;
50; Mismatches 102;
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A; Reference numer: A00641

A; Molecule type: mRNA
A; Cross-references: UNIRPOT: P00533; EMBL: X00588; NID: g31113; PIDN: CAA25240.1; PID: g7579
A; Note: the authors translated the codon AAG for residue 540 as Asn
R; Tabili, S.; Xu, Y.; Stratton, R.H.; Rock, B.A.; Merlino, G.T.; Pastan, I.
R; Tabili, S.; Xu, Y.; Stratton, R.H.; Rock, B.A.; Merlino, G.T.; Pastan, I.
R; Tabili, S.; Xu, Y.; Stratton, R.H.; Rock, B.A.; Merlino, G.T.; Pastan, I.
R; Tabili, S.; Xu, Y.; Stratton, R.H.; Rock, B.A.; Merlino of the human epidermal gr
A; Molecule type: DNA
A; Status: translation not shown
A; Molecule type: DNA
A; Residues: 1-29 sISH>
A; Residues: 1-29 sISH>
A; Residues: 1-29 sISH>
A; Cross-references: GB: M11234; NID: g181981; PIDN: AA52370.1; PID: g553272
R; Haley, J.; Whittle, N.; Bennett, P.; Kinchington, D.; Ullrich, A.; Waterfield, M.
Oncogene Res. 1, 375-396; 1987
A; Title: The human EGF receptor gene: structure of the 110 kb locus and identification of A; Mareference number: S30024; MUID: 8821733; PMID: 3329716
                                                                                                                                                                                                                                                                                                                                                                                        A;Accession: S30024
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-29 c.HA2-
A;Cross-references: EMBL:X06370; NID:g31118; PIDN:CAA29668.1; PID:g31119
R;Haley, J.D.; Waterfield, M.D.
J. Biol. Chem. 266, 1746-1753, 1991
A;Title: Contributory effects of de Novo transcription and premature tran
A;Reference number: A38672; MUID:91107677; PMID:1988448
A; Reference number: A00641; MUID:84219729; PMID:6328312
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A;Title: Human epidermal growth factor receptor cDNA sequence and aberrant expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             epidermal growth factor receptor precursor - human
N;Contains: protein-tyrosine kinase (EC 2.7.1.112) erbB
C;Species: Homo sapiens (man)
C;Date: 15-Nov-1984 Hesquence revision 27-Nov-1985 #text change 09-Jul-2004
C;Accession: A00641; A25772; §30024; A36672; A00642; A43615; A23062; A05281; A60143;
R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.
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premature transcript termina

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A; Molecule type: DNA
A; Residues: 1-29 cHAL>
A; Experimental source: carcinoma cell line A431-7
B; Xu, Y.; Ishii, S; Clark, A.J.L.; Sullivan, M.; Wilson, R.K.; Ma, D.P.; Roe, B.A.; Mer
Nature 309, 806-810, 1984
A; Title: Human epidermal growth factor receptor cDNA is homologous to a variety of RNAs
A; Reference number: A00642; MUID: 84245835; PMID: 6330563
A; Reference number: A00642
A; Residues: "RCAWRRA, 150-187, KGVIQAV, 195, M', 197, A', 199-222, 'S', 224-304, 'RA', 307-321
A; Residues: "RCAWRRA, 150-187, KGVIQAV, 195, M', 197, 'A', 199-222, 'S', 224-304, 'RA', 307-321
A; Residues: "RCAWRRA, 150-187, KGVIGAV, Stolarsky, L.S.; Weber, W.; Evans, R.M.; Verma, I
Science 224, 843-848, 1984
A; Title: Expression cloning of human EGF receptor complementary DNA: gene amplification
A; Reference number: A43615; MUID: 84196372; PMID: 6326261
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A;Residues: 740-744, X',746-747 <RUS>

R;Residues: 740-744, X',746-747 <RUS>

R;Mroczkowski, B.; Mosig, G.; Cohen, S.

Nature 309, 270-273, 1984

Nature: 309, 270-273, 1984

A;Title: ATP-strimulated interaction between epidermal growth factor receptor and the A;Reference number: A38023; MIID:8419154; PMID:6325948

A;Contents: annotation; receptor activity
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A, Molecule type: mRNA
A, Residues: 713-964 «LIN»
A, Experimental source: epidermoid carcinoma cell line A431
A, Experimental source: epidermoid carcinoma cell line A431
B, Simmen, F.A.; Gope, M.L.; Schulz, T.Z.; Wright, D.A.; Carpenter, G.; Biochen. Biophyse. Res. Commun. 124, 125-132, 1984
A, Reference number: A23062; MUID: 85046483; PMID: 6093780
A, Accession: A23062
A, Molecule type: mRNA
A, Residues: 1028-1210 «SIM»
A, Residues: 224, 294-297, 1984
A, Reference number: A05281; MUID: 84172183; PMID: 6324343
A, Residues: 225-30, %', 32-51,454-467 «WEB»
B, Russo, M.W.; Lukas, T.J.; Cohen, S.; Staros, J.V.
J, Biol. Chem. 260, 5205-5208; 1985
A, Title: Identification of residues in the nucleotide binding site of the A, Reference number: A60143; MUID: 8182650; PMID: 2985580
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A;Accession: S24942
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A;Note: the EGF receptor (and other tyrosine kinases) can mick double-stranded DNA B;Chen, W.S.; Lazar, C.S.; Lund, K.A.; Welsh, J.B.; Chang, C.P.; Walton, G.M.; Der, C.J. Cell S; 33.4, 189
A;Title: Functional independence of the epidermal growth factor receptor from a domain r A;Reference number: A3333; MUID:90003233; PMID:2790960
A;Comment: Binding of EGF to the receptor leads to internalization of the EGF-receptor C;Genetics: annotation; internalization signal
C;Comment: Binding of EGF to the receptor leads to internalization of the EGF-receptor C;Genetics: GBS:EGFR
A;Cross-references: GDB:120610; OMIM:131550
A;Map position: 7p12.3-7p12.1
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphorprotein; phosphorprotein: Binding medicted <a href="Mailto-24/Pomain: EGF receptor extracellular domain repeat <a href="EEE">EEE</a>
F;25-1210/Product: EGF receptor extracellular domain repeat <a href="EEE">EEE</a>
F;55-000/Domain: EGF receptor extracellular domain repeat <a href="EEE">EEE</a>
F;669-1210/Domain: intracellular #status predicted <INM>F;669-1210/Domain: protein kinase homology <INM>F;10-975/Domain: protei
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46.5%; Score 3168; DB 1; Length 1210;
Best Local Similarity 49.8%; Pred. No. 1.6e-124;
Matches 630; Conservative 178; Mismatches 351; Indels 106;
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Production growth factor receptor precursor - chicken
N;Contains: protein-tyrosine kinase (EC 2.7.1.112) erbB
C;Species: Gallus gallus (chicken)
C;Date: 28-Feb-1986 #sequence_revision 05-May-1995 #text_change 09-Jul-2004
C;Accession: A27720; A00643
R;Lax. I; Johnson, A.; Howk, R.; Sap, J.; Bellot, F.; Winkler, M.; Ullrich, A.; Vennst.
A;Title: Chicken epidermal growth factor (EGF) receptor: CDNA cloning, expression in monappleterence number: A27720; MUID:88261272; PMID:3260329
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                                       VVVLGVVFGI-LIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRK 722
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                                                                                                                                 1140 VNQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYL-T
                  VPQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWD
                                                                                                          QLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEE
                                                                                                                                                                                           CRVIQGI.PREYVNARHCL.PCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSG
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A, Residues: 689-694, X', 696-704, L', 706-707;989-992, YXX', 995-996, X', 998-1000;1002-1009, A, Hibbs, M.L.; Dunn, A.R.; Alexander, W.S.
Submitted to the EMBL Data Library, April 1994
A, Description: The complete cDNA sequence of the Mouse Epidermal Growth Factor Receptor A, Reference number: 54325
A, Accession: 54325
A, Reference number: 54325
A, Retairs, preliminary
A, Molecule type: DNA
A, Reference: EMBL: X78997; NID: 948830; PIDN: CAA55587.1; PID: 948831
R, R, Ratia, B.C.; Das, A.S. A, Andrews, G.K.; Day, S.K.
A, Title: Expression of the epidermal growth factor receptor gene is regulated in mouse the A, Reference number: 149643; MUID: 93126380; PMID: 7678348
A, Reference number: 149643; MUID: 93126380; PMID: 7678348
A, Residues: 12-20, 22-132 cRES
A, Accession: 149643
A, Molecule type: mRA
A, Residues: 12-20, 22-132 cRES
A, Gonetics: ESFR
C, Superfamily: epidermal growth factor receptor; protein kinase homology
C, Rywords A, AP, Consuler Bateus predicted crime and ransforming protein; phosphopromental signal sequence #status predicted crime.
F, 648-670/Domain: signal sequence #status predicted crime.
F, 712-977/Domain: protein kinase homology crime and status experimental
F, 997, 1071/Binding site: phosphate (Ser) (covalent) #status experimental
F, 997, 1071/Binding site: (or 1030 or 1032) phosphate (Ser) (covalent) #status experimental
F, 1197/Binding site: (or 1030 or 1032) phosphate (Ser) (covalent) #status experimental
F, 1197/Binding site: (or 1030 or 1032) phosphate (Ser) (covalent) #status experimental
F, 1197/Binding site: (or 1030 or 1032) phosphate (Ser) (covalent) #status experimental
F, 1197/Binding site: (or 1030 or 1032) phosphate (Ser) (covalent) #status experimental
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A;Residues: 969-971, K', 973-1115, D' <EIS>
A;Cross-references: ENBL: 212608
R;Heisermann, G.J.; Gill, G.N.
J. Biol. Chem. 263, 13152-13158, 1988
A;Title: Epidermal growth factor receptor threonine and A;Reference number: A28941; MUID:88330814; PMID:3138233
A;Accession: A28941
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46.2%; Score 3144; DB 2;
Best Local Similarity 49.8%; Pred. No. 1.6e-123;
Matches 633; Conservative 170; Mismatches 359;
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Ay 253

Ay 253

Ay 253

C; Species: Home sapiens (man)

C; Date: 22-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004

C; Accession: A47253

R; Plowman, G.D.; Culouscou, J.M.; Whitney, G.S.; Green, J.M.; Carlton, G.W.; Foy, L.; N

Proc., Natl. Acad. Sci. US.A. 90, 1746-1750, 1933

A; Title: Ligand-specific activation of HER4(P1980erbB4, a fourth member of the epidermal A; Reference number: A47253

A; Accession: A47253

A; Accession: A47253

A; Accession: A47253

A; Residues: Dreliminary; not compared with conceptual translation

A; Molecule type: nucleic acid

A; Molecule type: nucleic acid

A; Residues: 1-1308 cPLO.

A; Notes: sequence extracted from NCBI backbone (NCBIP:126842)

C; Superfamily: epidermal growth factor receptor; protein kinase homology

C; Keywords: AFF; growth factor receptor; protein kinase homology

F; 716-981/Domain: protein kinase ATP-binding motif
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C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: alternative splicing; ATP; autophosphorylation; glycoprotein; growth factor pecific protein kinase
pecific protein kinase
F;1-30/Domain: signal sequence #status predicted <SIG>F;1-123/Product: epidermal growth factor receptor #status predicted <EXT>F;11-654/Domain: EGF receptor extracellular domain repeat <EEE>F;10-654/Domain: EGF receptor extracellular domain repeat <EEE>F;307/Domain: EGF receptor extracellular domain repeat <EEE>F;678-1223/Domain: intracellular #status predicted <IVM>F;655-677/Domain: intracellular #status predicted <IVM>F;678-1223/Domain: intracellular #status predicted <IVM>F;79-984/Domain: protein kinase homology <KIN>F;79-984/Domain: protein kinase homology <KIN>F;719-984/Domain: protein kinase ATP-binding site: carbohydrate (Thr) (covalent) #status predicted <F;192,650/Binding site: carbohydrate (Ser) (covalent) #status predicted F;192,650/Binding site: phosphate (Thr) (covalent) (by protein kinase C) #status predicted F;54/Active site: Lys #status predicted (Tvr) (covalent) (tovalent)                                                                                                                                                         pro
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                                                                                             Rivilsen, T.W.; Maroney, P.A.; Goodwin, R.G.; Rottman, F.M.; Crittenden, L.B.; Raines, Cell 41, 719-726, 1985
A;Title: c-rebB activation in ALV-induced erythroblastosis: novel RNA processing and pi A;Reference number: A00643; MUID:85228222; PMID:2988784
A;Accession: A00643
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45.9%; Score 3123.5; DB 1; Length 1223;
Best Local Similarity 48.7%; Pred. No. 1.1e-122;
Matches 632; Conservative 175; Mismatches 345; Indels 145; Gaps
                                                                          GB: M20386
                        Molecule type: mRNA
Residues: 1-1223 <LAX>
Cross-references: UNIPROT:P00534;
                                                                                                                                                                                                     A;Accession: A00643
A;Molecule type: mRnA
A;Residues: 565-1223 <NIL>
A;Cross-references: GB:M10066
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44.1%; Score 3003.5; DB 2; Length 1308; 45.6%; Pred. No. 1.2e-117; ive 184; Mismatches 375; Indels 173; Gaps 28;	WGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTY 64		IEHNRDLSFLRSVREVTGYVLVALNQFRYLPLENLRIIRGTKLYEDRYALAIFLNYRKDG 127	NTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLI 184	DINRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGC-ARCKGPLPTDCCHEQCAAG 243	STNGSSGCGCCHKSCTG-RCWGPTENHCQTLTRTVCAEQCDGRCYGPYVSDCCHRECAGG 237	CTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACFYNY 303	ı m	:	FAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLS 423	FLVTGIHGDPYNAIEAIDPEKLNVFRTVREITGFLNIQSWPPNWTDFS 415	VEONLOVIRGRILHNGAYSLTLOGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWD 483	TLFSTINGRIVIRDNRKAENCTAEGWVCNHLCSSDGCWGPGPDQCLSCRRFSRGRICIES 535	CRVIQGLPREYVNARHCLPCHPECQP-QNGSVTCFGPEADQCVACAHYKDPPFCVARCPS 602	engsicvecbpocermengilitchdepopunctrcsHrkbdencvercen 595	_	GLOGANSFIFKYADPDRECHPCHPNCTQGCNGPTSHDCIYYPWTGHSTLPQHAR-TPL 652	SIVSAVV-GILLVVVLGVVFGILIKRROQKIRKYTMRRLLQETELVEPLTPSGAMPNQA 710			AYVMAGVGSPYVSELLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLMWCMQIA 830	LVRILGVCLSPTIQLVTQLMPHGCLLETVHEHKDNIGSQLLINWCVQIA 828	KGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMA 890	0 1	LESILRREFTHGEDVWSYGVTVWELMTFGAKPYDGIPAREIDPLLEKGERLPPPICTID 950 LEGIHYRRFTHGEDVWSYGVTIWELMTFGAKPYDGIPREIDPLLEKGERLPPPICTID 948 LEGIHYRRFTHGEDVWSYGVTIWELMTFGAKPYDGIPTREIDPLLEKGERLPOPPICTID 948	VYMIMVKGWHIDSECRPRERUSEFSRWARDPQRFVVIQNED-LGPASPLDSTFYRSLL 1009		EDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEEE 1069
44.1%; imilarity 45.6%; ; Conservative 184				NTTPVTGAS NF													−დ	H										
Query Match Best Local S Matches 614	0y 9	9	Db 68	Oy 125		Db 179	Oy 244			Qy 364	Db 356		Uy 484 Db 476	Qy 544	Db 536	Qy 603	Db 596	Qy 652	ov 711		0y 771	Db 769		Db 829	Oy 891	Qy 951	Db 949	Qy 1010

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A;Introns 19213; 898/1; 947/1; 979/3; 1025/3; 1056/1

C;Superfamily: epidermal growth factor receptor; protein kinase homology

C;Keywords: ATP; growth factor receptor; phosphotransferase; transmembrane protein; tyre

F;1-25/Domain: signal sequence #status predicted <SIG>

F;26-1166/Product: kinase-related transforming protein (Tu) #status predicted <MAT>

F;707-972/Domain: protein kinase homology <KIN>

F;715-723/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein-tyrosine kinase (EC 2.7.1.112) mrk-Y precursor - southern platyfish NiAlternate names: epidermal growth factor receptor homolog; kinase-related transforming; Species: Xiphophorus maculatus (southern platyfish) (j.Species: Xiphophorus maculatus (southern platyfish) (j.Species: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004 (j.Accession: 806442; 813809 R.Witchrodt, J.; Adam, D.; Malitschek, B.; Maeueler, W.; Raulf, F.; Telling, A.; Robert: Mature 341, 415-421, 1989 A; Pitche: Novel puttative receptor tyrosine kinase encoded by the melanoma-inducing Tu losation number: 806142; MUID:90015140; PMID:2797166
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1009 DEEDLEDWADAEEYLVP-QAFNIPPP-----IYTSRARIDSNRS-----EIGHSPPPAY 1056
                                                                                                                   -----PLAP-SEGAGSDVFDGDLGMGAAKGLQS 1100
                                                                                                                                                                                                                                                                           LPTHDPSPLORYSEDPTVPLPS-----ETDGYVAPLTCSPQPEYVNQPDVRPQPPSPR 1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --------PSPAFDNLYYWDQDPPERGA--PPSTF 1237
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39.7%; Score 2701; DB 1;
Best Local Similarity 45.5%; Pred. No. 3.8e-105;
Matches 576; Conservative 163; Mismatches 390;
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TEFKKDRVLGSGAFGTVYKGLWNPDGENIRIPVAIKVLREATSPKVNQEVLDEAYVMASV 766
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                                                                                                                                                                                                                                 || || : | : | : | | | | | | | | | | CPSNYVVTE-GACVRSCSAGMLEVD-ENGKRSCKPCDGVCPKVCDG1G1GSLSNT1AVNS 357
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A36223
Kinase-related transforming protein (erbB3) (EC 2.7.1.-) precursor - human
C;Species Homo sapiens (man)
C;Date: 04-0ct-1991 #sequence_revision 13-Jan-1993 #text_change 09-Jul-2004
C;Accession: A36223; I59164*
C;Accession: A36223; Is9164*
C;Accession: A36223; Is9164*
C;Accession: A36223; Is9164*
C;Accession: A36223; Is9164*
C;Accession: A3623; Is9164*
A;Title: Isolation and characterization of ERBB3, a third member of the ERBB/epidermal
A;Reference number: A36223; MUD:90083234; PMID:2687875
                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary
A;Molecule type: mRNA
A;Crose-references: UNIPROT: P21860; GB:M29366
B;Plowman, G.D.; Whitney, G.S.; Neubauer, M.G.; Green, J.M.; McDonald, V.L.; Todaro, G.B;Plowman, G.D.; Whitney, G.S.; Neubauer, M.G.; Green, J.M.; McDonald, V.L.; Todaro, G.A;Title: Molecular cloning and expression of another epidermal growth factor receptor-r
A;Reference number: I59164; MUID:90311312; PMID:2164210
A;Accession: I59164
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A Cross-references: GDB:119880; OMIM:190151
A Cross-references: GDB:119880; OMIM:190151
A A Map position: 12413-12413
C; Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase homol C; Keywords: ATP; phosphotransferase
C; Keywords: ATP; phosphotransferase
F; 707-972/Domain: protein kinase homology < KIN>
F; 715-723/Region: protein kinase ATP-binding motif
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A;Moleoule type: mRNA
A;Residues: 1-559,'G','561-957,'F',959-1063,'G',1065-1342 <RES>
A;Cross-references: GB:M34309; NID:g183990; PIDN:AAA35979:1; PID:g306841
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11 Similarity 40.7%; Pred. No. 6.8e-94;
533; Conservative 191; Mismatches 458; Indels 129;
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NyAlternate names: ErbB3 protein; HER3 protein
C;Species: Rattus norvegicus (Norway rat)
C;Date: 17-Jan-1996 #sequence_revision 19-Apr-1996 #text_change 16-Aug-2004
C;Accession: JC4387
R;HellyPer, N.J.; Kim, H.H.; Greaves, C.H.; Sierke, S.L.; Koland, J.G.
Gene 165, 279-284, 1995
A;Title: Cloning of the rat ErbB3 cDNA and characterization of the recombinant
A;Reference number: JC4387; MUID:96096535; PMID:8522190
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                                                                                                                                     LG--AKGPIYKYPDVQNECRPCHENCTQGCKGPELQDCLGQTLVLIGKTHLTMALTVIAG
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                                                                       RVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGV
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                        FRNPHQALLHTA-NRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEEC
                                               LRGPTERRLDIKHNRPRRDCVAEGKVCDPLCSSGGCWGPGPGQCLSCRNYSRGGVCVTHC
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A; Molecule type: mRNA
A; Residues: 1-1339 <HEL>
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DD	3 QY 757 0 Db 233	1013 QY 817 LGSQDLLNWCWQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETE	1068 QY 877 YHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLE	1105 Qy 93.7 KGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRMARDPQRFVVIQ-NEDLG	1145 QY 996 PASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSG	1187 Qy 1056 GGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQ	Qy 1111 RYSEDPTVPLPSETDGYVAPLTGSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLE	Qy 1169 RAKTLSPGKNGVVKDVPAFGGAVENPEYLTPQGGAAPQPHPPPAF	, Raines, Psing and pro	-i.g	A;Accession: A00644 A;Accession: A00644 A;Molecule type: DNA A;Residues: 1-604 cYAM> A;Residues: 1-604 cYAM> A;Residues: 1-604 cYAM> A;Coss-references unIPROT:P00535; GB:K01216; NID:g209676; PIDN:AAA42400.1; PID:g A;Coss-references unIPROT:P00535; GB:K01216; NID:g209676; PIDN:AAA42400.1; PID:g A;A;TiLle: Sequencing the erab gene of avian erythroblastosis virus reveals a new ty	 	637 C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: ATP; oncogene; phosphotransferase; transforming protein; tyrosine-specifii F;130-395/Domain: protein kinase homology <kin.> F;130-46/Recion: protein kinase ATP-binding motif</kin.>
VGSLDHAHIVRLLGLCPGSSLQLVTQYLPLGSLLDHVKQHRETLGPQLLLNWGVQIAKGM SYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALES	ILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYM	IMVKCWMIDSECRPRFRELVSEFSRMARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDD :	MGDLVDAEEXLVPQQGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEBSEE		PSPLQRXSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDV 11 	RPQPPSPREGPKDVFAF	1210 1209	RESULT 11 TUFVIA TUFVIA TUFVIA Protein-tyrosine kinase (EC 2.7.1.112) erbB - avian leukosis virus N;Contains: amino end of gag protein; env protein fragment; protein-tyrosine C;Species: avian leukosis virus, ALV C;Dete: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 09-Jul-2004	R.N. Ben, T.W.; Maroney, P.A.; Goodwin, R.G.; Rottman, F.M.; Crittenden, L.B. Cell 41, 719-726, 1985 A;Title: c-exbB activation in ALV-induced erythroblastosis: novel RNA process A;Reference number: A00643; WUID:85228222; PMID:2988784 A;Reference number: A00643; MUID:8528222; PMID:2988784 A;Reference number: A00643	P:P00534; GB:M10066; GB:W13881; NID:g211749; PIDN:AAA48763 KERBBF, release 109.0, the source is designated as Gallus synthesized as a gag-env-erbB protein.	Gene: gag-env-erbB Superfamily: epidermal growth factor receptor; protein kinase homology Keywords: ATP, oncogene; phosphotransferase; transforming protein; tyrosine 1-6/Product: agg protein (fragment) #status predicted <gag> 7-59/Product: env protein (fragment) #status predicted <gnv> 60-658/Product: protein-tyrosine kinase erbB #status predicted <erb> 194-459/Domain: protein kinase homology <kin> 202-210/Redion: protein kinase homology <atn></atn></kin></erb></gnv></gag>	Lys #status predicted 25.9%; Score 1766.5; DB 1; Length 698; urity 52.2%; Pred. No. 1.5e-66; onservative 80; Mismatches 137; Indels 125; Gaps	578 GPEADQCVACAHYKDPPFCVARCPGGVKPDLSYMPIWKFPDEBGACQPCPINCTHSCVDL

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A; Molecule type: DNA
A; Residues: 'A', 832-866, 'V', 868-943, 'QTPSLVK' < WAD>
A; Residues: 'A', 832-866, 'V', 868-943, 'QTPSLVK' < WAD>
A; Cross-references: EMBL:X02293; NID:g7922; PIDN:CAA26157.1; PID:g929565
C; Coment: This sequence is tentative because the introns have not been identified.
C; Genetics:
A; Gene: FlyBase:Egfr
A; Cross-references: FlyBase:PBgn0003731
A; Map position: 2 57F
C; Superfamily: epidermal growth factor receptor; protein kinase homology
C; Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphorylation: cxtracellular #status predicted < EXT>
F; 132/Domain: transmembrane #status predicted < TWM>
F; 732-764/Domain: transmembrane #status predicted < TWM>
F; 8610-072/Domain: protein kinase homology < KIN>
F; 8610-0344, Region: protein kinase ATP-binding motif
F; 122, 300, 324, 363, 518, 688, 655, 700/Minding site: carbohydrate (Asn) (covalent) #status predicted
F; 744/Binding site: phosphate (Thr) (covalent) (by protein kinase C) #status predicted
F; 1181/Binding site: phosphate (Tyr) (covalent) (by autophosphorylation) #status predict
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38 ITNYIVIGLDLIPCTLSYRLQIIRGRTLFSLSVEERYALFV-
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Cispecies: Drosophila melanogaster
Cispecies: Drosophila EGF receptor gene homolog: Conservation of both hormone binding
A;Title: The Drosophila EGF receptor gene homolog: conservation of both hormone binding
A;Title: The Drosophila EGF receptor gene homolog: conservation of both hormone binding
A;Accession: A00640
A;Molecule type: DNA
A;Recidues: 1-1330 - 611V3
A;Cross-references: UNIPROT: P04412; EMBL: K03054
B;Waddworth, S.C.; Vincent III, W.S.; Bilodeau-Wentworth, D.
Nature 314, 178-180, 1985
A;Title: A Drosophila genomic sequence with homology to human epidermal growth factor re
A;Reference number: A38021; MUID:85137938; PMID:2983232
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                                                                                                                                                                             CAHFIDGPHCVKACPAGVLGENDTL-VRKYADANAVCOLCHPNCTRGCKGPGLEGCP---
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                                                                    Gaps
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  Length 604;
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  Score 1703; DB 1;
Pred. No. 5.5e-64;
76; Mismatches 128;
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CAASPERSSKITANLD	09 038 DDKGCPREORASPLTSIVANV-GILL/VVVLGVVFGILIKRRQOKIRKTTWRRILGETEL 696 058 015607NGSKTPSIVAGNVGILLGCLVVVGIGIGICLIRER-HIVRKRILARRILGEREL 113 059 015607
Cidate: 03-Mar-1994 #sequence_revision 26-May-1995 #text_change 09-Jul-2004 CiAccession: S15745 Rivenstroem, B. Rivenstroem, S15745 A;Reference unmber: S15743 A;Reference unmber: S15743 A;Reference unmber: S15743 A;Reference unmber: S15745 A;References: UNIPROT:Q85468; UNIPROT:Q64895; EMBL:X12707 C;Genetics: A;Genetics: A;Ge	A.Title: Common site of mutation in the erbB gene of avian erythroblastosis virus mutan A.Fitle: Common site of mutation in the erbB gene of avian erythroblastosis virus mutan A.Fitle: Common site of mutation in the erbB gene of avian erythroblastosis virus mutan A.Feference number: S00727 A.Molecule type: DNA A.Fesidues 1.545 < SCO> A.Fesidues 2.1545 < SCO> A.Fesidues 2.154

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1056 GGDLTLGLEPSEEEAPRSPL----APSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQ 1110
                                                                                                                                                                                                                                                                                                                              1111 RYSEDPTVPLPSETDGYVAPLICSPOPEYVNOPDVRPOPPSPREGPLPAARPAGAT-LER 1169
937 KGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRNARDPQRFVVIQ-NEDLG 995
                                             817 LGSQDLLNWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETE 876
                                                                                                          877 YHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLE 936
                                                                                                                                                      294 YHAEGGKVPIKKMALESILHRIYTHQSDVWSYGVTVWELMTFGSKPYDGIPASEISSVLE 353
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Search completed: January 25, 2005, 21:30:29 Job time : 44.8376 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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OM protein - protein search, using sw model

January 25, 2005, 06:04:09; Search time 12.9167 Seconds (without alignments) 111.736 Million cell updates/sec Run on:

US-09-806-703A-12 74 1 QYIKANSKFIGITEL 15 Perfect score: Sequence: BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 seqs, 96216763 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_79:* Database :

pirl:* pir2:* pir3:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES	ID Description	BTCLTN tentoxilysin (EC 3	S29982 class II histocomp	S31029 . gene 84 protein -	G86826 diamine N-acetyltr			-	A26868 major merozoite su		SAZQGM major merozoite su	A45948 major merozoite su	S38635 blastopia polyprot						[acyl-carrier-p							PH1519 Ig heavy chain V r	Ig heavy	Ig heavy	
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de	Query Match	100.0	60.1	59.5	58.1	58.1	57.4	57.4	57.4	57.4	57.4	57.4	56.8	55.4	55.4	55.4	54.7	54.1	54.1	54.1	54.1	54.1	52.7	52.7	52.7	52.7	52.7	52.7	
	Score	74	44.5	44	43	43	42.5	42.5	42.5	42.5	•	42.5	42	41	41	41	40.5	40	40	40	40	40	39	39	39	39	39		
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adenylate kinase (type II restrictio	probable acetyl-Co	type IIS restricti	hypothetical prote	hypothetical prote	hypothetical prote	hypothetical prote	tRNA-pseudouridine	probable hexosyltr	hypothetical prote	hypothetical prote	cellulase (EC 3.2.	endo-1,4-beta gluc	methyl-accepting c	hemagglutinin-neur
KIYMC	B71808	T43043	F64690	C90569	A64639	H71875	F64472	F70361	F71196	T51466	T29127	T52135	A86158	E82395	HNNZ80
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213	326	349	423	505	188	188	256	287	381	383	424	501	501	561	572
52.7	52.7	52.7	52.7	52.7	51.4	51.4	51.4	51.4	51.4	51.4	51.4	51.4	51.4	51.4	51.4
39	39	39	39	39	38	38	38	38	38	38	38	38	38	38	38
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

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tentoxilysin (EC 3.4.24.68) precursor - Clostridium tetani
N;Alternate names: tetanus neurotoxin
C;Species: Clostridium tetani
C;Date: 31-Mar-1988 #sequence revision 31-Mar-1988 #text change 09-Jul-2004
C;Accession: A25689; A25757; Ā25194; B25194; A60759; S69348; S09364
R;Eisel, U; Jarausch, W; Goretzki, K.; Henschen, A.; Engels, J.; Weller, U.; Hudel, M
                                                                                                                                                                                                                                                                                                                                                                                   A;Title: Tetanus toxin: primary structure, expression in E. coli, and homology with bot A;Reference number: A25689; MUID:87053814; PMID:3536478
A;Accession: A25689
RESULT 1
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A Molecule type: DNA A Residues: 1-1315 <EIS> A;Cross-references: UNIPROT:P04958; GB:X04436; NID:g40769; PIDN:CAA28033.1; PID:g40770 R;Fairweather, N.F.; Lyness, V.A. Nucleic Acids Res. 14, 7809-7812, 1986 A;Title: The complete nucleotide sequence of tetanus toxin. A;Reference number: A25757; MUID:87040747; PMID:3774547

A; Accession: A25757

A; Molecule type: DNA
A; Residues: 1-1315 < PRI>
A; Cross-references: GB x706214; NID: g40773; PIDN: CAA29564.1; PID: g40774
A; Raxperimental source: strain CN3911
B; Fairweather, N.F.; Lyness, V.A.; Pickard, D.J.; Allen, G.; Thomson, R.O.
A; Fairweather, N.F.; Lyness, V.A.; Pickard, D.J.; Allen, G.; Thomson, R.O.
A; Fairweather, N.F.; Lyness, V.A.; Pickard, D.J.; Allen, G.; Thomson, R.O.
A; Fairmental source: sequencing, and expression of tetanus toxin fragment C in A; Reference number: A25194; MUID: 86085672; PMID: 3510187

A;Molecule type: DNA A;Residues: 743-1315 «FA2> A;Cross-references: GB:M12739; NID:g144920; PIDN:AAA23282.1; PID:g144921 A;Accession: B25194

A;Molecule type: protein A;Residues: 865-894 <FA3> R;Matsuda, M.; Lei, D.L.; Sugimoto, N.; Ozutsumi, K.; Okabe, T. A:Infect. Immun. 57, 3589-3593, 1989 A;Title: Isolation, purification, and characterization of fragment B, the NH-2-terminal A;Reference number: A60759; MUID:90035436; PMID:2478476

A; Molecule type: protein
A; Residues: 461-475 cMAT>
A; Residues: 461-475 cMAT>
R; Demotz, S.; Lanzavecchia, L.; Eisel, U.; Niemann, H.; Widmann, C.; Corradin, G.
J. Immunol. 142, 394-402, 1989
A; Title: Delineation of several DR-restricted tetanus toxin T cell epitopes.
A; Reference number: US0098; WIDD: 89093918; PMID: 2463305
A; Contents: annotation; epitope region
R; Schiavo, G;; Benfenati, F; Poulain, B; Rossetto, O; de Laureto, P.P.; DasGupta, B

Nature 359, 832-835, 1992 Affile: Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteoly A;Reference number: 827125; MUID:93063293; PMID:1331807 A;Contents: annotation

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the nucleotide sequence was submitted to the EMBL Data Library, December 1992
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                                                                                                                                                                  59.5%;
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69.2%;
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Best Local Similarity 64.3%;
Matches 9; Conservative
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                                                                                                                                                                                                                                                                                                                              50 YIKRNGKFVGTWEV 63
                                                                                                                                                                                                                                                                                     2 YIKANSKFIGITEL 15
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Best Local Similarity 69.2.
Conservative
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Best Local Similarity
Matches 8; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
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                                      C,Genetics:
A,Gene: 84
A,Start codon: GTG
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C; Species: Mycobacterium phage L5
C; Species: Mycobacterium phage L5
C; Date: 30.58p-1993 #sequence_revision 30-Sep-1993 #text_change 09-Jul-2004
C; Accession: S31029
R; Donnelly-Wu, M.K.; Jacobs Jr., W.R.; Hatfull, G.F.
Mol. Microbiol. 7, 407-417, 1993
A; Title: Superinfection immunity of mycobacteriophage L5: applications for genetic trans
A; Reference number: S30949; MUID:93211283; PMID:8459767
A; Accession: S31029
A; Status: nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A; Residues: 1-66 <DON>
A; Cross-references: UNIPROT:Q05301; EMBL:Z18946; NID:g15859; PIDN:CAA79460.1; PID:e59702
                                                                                                                                                  A; Molecule type: protein A; Molecule type: protein A; Molecule type: protein A; Molecule type: Dobes A; Molecule type: Dobes A; Molecule type: 2-31 cDEF.
C; Comment: The gource of this protein was an extrachromosomal plasmid.
C; Comment: The precursor is cleaved by endogenous proteinase activity to form light (fra dual chains are not toxic when separated). The amino end of the heavy chain (fragment B) C; Comment: Pragment D forms inon channels in a lipid bilayer. Fragment C binds to garglid C; Comment: This potent neurotoxin binds to peripheral neuronal synapses, is internalized presynaptic neurons. It inhibits neurotransmitter release by proteolytic cleavage of sy
                                                                                                                                                                                                                                                                                                                                                                                              C.Function:
A.Description: blocks neuroexocytosis via hydrolysis of a Gln-Phe peptide bond in synapt
C.Superfamily: tetanus toxin
C.Superfamily: tetanus toxin
C.Superfamily: tetanus toxin
C.Superfamily: tetanus toxin
C.S.Superfamily: tetanus toxin
C.S.Superfamily: tetanus toxin
C.S.Superfamily: tetanus toxin
C.S.Superfamily: tetanus toxin
F.2-457/Product: tentoxylysin light chain (fragment B.C) #status predicted cTTL>
F.461-1854/Domain: channel forming (fragment B) #status predicted cTXB>
F.665-1315/Domain: gangiloside binding (fragment C) #status predicted cTXC>
F.233,227/Binding site: zinc (His) #status predicted
F.234/Active site: Glu #status predicted
Ride Filippis, V.; Vangelista, L.; Schiavo, G.; Tonello, F.; Montecucco, C.
Bur. J. Biochem. 229, 61-69, 1995
A;Title: Structural studies on the zinc-endopeptidase light chain of tetanus neurotoxin.
A;Reference number: 869348; MUID:95262688; PMID:7744050
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C;Species: Salmo salar (Atlantic salmon)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               homology
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C;Species: Salmo salar (Atlantic salmon)
C;Accession: S2982
C;Accession: S2982
C;Accession: S2982
C;Accession: S2980
A;Reference number: S2980
A;Accession: S2980
A;Accession: S2982
A;Ccossorces: UNIPROT:Q31590; EMBL:X70166; NID:g64369; PID:g64370
C;Superfamily: class II histocompatibility antigen; immunoglobulin homol
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100.0%; Pred. No. 3.8e-05;
tive 0; Mismatches 0;
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55.6%;
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51 EYIRFNSTVGKFVGYTEL
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Best Local Similarity 55.6
Matches 10, Conservative
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R;Bolotin, A.; Wincker, P.; Mauger, S.; Jaillon, O.; Malarme, K.; Weissenbach, J.; Ehrl: Genome Res. 11, 731-753, 2001
Genome Res. 11, 731-753, 2001
A;Fitle: The complete genome sequence of the lactic acid bacterium Lactococcus lactis shakeference number: A86625; MUID:21235186; PMID:11337471
A;Accession: G86826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GB:AE005176; PID:g12724622; PIDN:AAK05713.1; GSPDB:
                                                                                                                                                                                                                                                                                                                                   - Lactococcus lactis subsp. lactis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Gene: yqfF
C;Superfamily: Escherichia coli ribosomal-protein-alanine N-acetyltransferase rimJ
C;Keywords: acyltransferase; coenzyme A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein 63 - ateline herpesvirus 3 (strain 73)
C;Species: ateline herpesvirus 3
A;Variaty: strain 73
A;Variaty: strain 73
C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 09-Jul-2004
C;Accession: T42976
R;Albrecht, J.C.; Fleckenstein, B.
B;Albrecht, J.C.; Fleckenstein, B.
A;Description: Primary structure of the herpesvirus ateles genome.
A;Reference number: Z22274
                                                                                                                                                                                                                                                                                                                             diamine N-acetyltransferase (EC 2.3.1.57) [imported] - Lactococcus lactis sn
N;Alternate names: spermidine acetyltransferase
C;Species: Lactococcus lactis subsp. lactis
C;Date: 23-Mar-2001 #sequence_revision 23-Mar-2001 #text_change 09-Jul-2004
C;Accession: G86826
                                                              Gaps
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A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-899 <ALLB-
A;Cross-references: UNIPROT:Q9YTK4; EMBL;AF083424; PIDN:AAC95587.1
A;Experimental source: strain 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 180
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   Length 66;
                                                           Indels
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Pred. No. 2.5;
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Pred. No. 13;
1; Mismatches
Score 44; DB 2
Pred. No. 0.58;
                                                        2; Mismatches
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major merozoite surface antigen precursor - malaria parasite (Plasmodium falciparum) (is C;Species: Plasmodium falciparum (C;Species: Plasmodium falciparum (C;Date: 28-Oct-1994 #text_change 09-Jul-2004 (C;Date: 28-Oct-1994 #text_change 09-Jul-2004 (C;Accession: A54498 #sequence_revision 28-Oct-1994 #text_change 09-Jul-2004 (C;Accession: A54498 #sequence_revision Parasitol. 27, 291-302, 1988 (C;Accession: Parasitol. 27, 291-302, 1988 (C;Accession: A54498) #UID:88142999; PMID:2449612 (C;Accession: A54498) #UID:88142999; PMID:2449612 (C;Accession: A54498) #Accession: A54498 (C;Accession: A54498) #Accession: A54498 (C;Accession: A54498) #Accession: A54498 (C;Accession: A54498) #Accession: A54498 (C;Accession: A54498) #Accession: Accession: Ac
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A;Residues: 1-1701 <PET>
A;Cross-treferences: UNIPROT:P13819; GB:M19143; NID:g160412; PIDN:AAA29653.1; PID:g160413
C;Superfamily: major merozoite surface antigen
C;Keywords: surface antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: DNA
A;Residues: 1-1104 <WEB1>
A;Residues: 1-1104 <WEB1>
A;Cross-references: UNTRROT:P04934; EMBL:X03831
B;Across-references: University of 1206, 1988
Nucleic Acids Res. 16, 1206, 1988
A;Title: Mrczostite surface protein sequence from the Camp strain of the human malaria paragement of the number: S06361; MUID:88143999; PMID:3278296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Residues: 1104-1726 <WEB2>
A;Cross-references: EMBL:X03831
A;Cross-references: EMBL:X03831
C;Comment: The merozoite stages of different strains have strain-specific surface antige C;Comment: P. falciparum has three stages: sporozoite, merozoite, and gametocyte. The merozoite merozoite surface antigen
C;Superfamily: major merozoite surface antigen; tandem repeat
F;1-19/Domain: signal sequence #status predicted <SIG>F;20-1726/Product: major merozoite surface antigen #status predicted <MT>F;1-19/Domain: aignal sequence #status predicted <SIG>F;7-19-96,100-105,109-120/Region: 3-residue repeats (S-G-T)
F;757-765/Region: 3-residue repeats (T-E-E)
F;757-765/Region: 3-residue repeats (T-E-E)
F;133,272,501,567,638,827,839,924,944,990,1016,1114,1221,1613,1658/Binding site: carbobh
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NyAlternate names: 195K glycoprotein
NyAlternate names: 195K glycoprotein
CySpecies: 30-Sep-1987 #sequence_revision 31-Mar-1991 #text_change 09-Jul-2004
CyAccession: A23386; 806361
KiWeber, J.L.; Leininger, W.M.; Lyon, J.A.
Nucleic Acids Res. 14, 3311-332, 1986
A;Fitle: Variation in the gene encoding a major merozoite surface antigen of the human rakeference number: A23386; MUID:86205236; PMID:3517809
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F;20-1701/Product: major merozoite surface antigen #status predicted
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                                                                                             Length 1701;
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                                                                                             DB 2;
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                                                                                    Score 42.5; DE
Pred. No. 31;
4; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4; Mismatches
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1001 QFVKSNSKVITGLTE 1015
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                                                                                    57.4%;
ilarity 60.0%;
Conservative
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Matches 9; Conservative
                                                                          Ouery Match
Best Local Similarity
Matches 9; Conserv
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Best Local Similarity
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                       Major merozoite gurface antigen precursor - malaria parasite (Plasmodium falciparum) (st. Alternate names: 190K protein; polymorphic schizont antigen c; Species: Plasmodium falciparum c; Species: Plasmodium falciparum c; Species: Plasmodium falciparum c; Species: Jumar-1990 #sequence_revision 31-Mar-1990 #text_change 09-Jun-2000 C; Accession: S06286 R; Certa, U.; Rotmann, D; Matile, H.; Reber-Liske, R. BWBO J. 6, 4137-4142, 1987 A; Reference number: S06286, MUID:88166657; PMID:3327688 A; Reference number: S06286, MUID:88166657; PMID:3327688 A; Reference number: S06286 A; Reference nu
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C;Superfamily: major merozoite surface antigen
C;Keywords: surface antigen
F;1-19/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5;
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Pred. No. 19;
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1009 QFVKSNSKVITGLTE 1023
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983 QFVKSNSKVITGLTE 997
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Best Local Similarity 60.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9; Conservative
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Best Local Similarity
Matches 9; Conserv
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Gaps

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Length 123;

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A;Accession: G36812
A;Accession: G36812
A;Accession: G36812
A;Accession: G36812
A;Residues: 1-899 <ALBs
A;Cross-references: GB:X64346; NID:g60320; PIDN:CAA45686.1; PID:g60384
B;Albrecht, J.C.; Nicholas, J.; Biller, D.; Cameron, K.R.; Biesinger, B.; Newman, C.; W.
J'Virol. 66, S047-5058, 1992
A;Title: Primary structure of the herpesvirus saimiri genome.
A;Reference number: A37309; MUID:92333688; PMID:1321287
A;Contents: annotation; protein-coding frames
A;Note: neither protein nor nucleotide sequence is given
C;Genetics:
A;Gene: 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    giderophore/Surfactin synthetase related protein [imported] - Clostridium acetobutylicum C; Species: Clostridium acetobutylicum C; Species: Clostridium acetobutylicum C; Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 09-Jul-2004 C; Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 09-Jul-2004 R; Nolling, U: Breton, G: Omelchenko, M.V.; Markarova, K.S.; Zeng, Q.; Gibson, R.; Lee.; Daly, M.J.; Bennett, G. M.; Koonin, E.V.; Smith, D.R.
J. Batteriol. 183, 4821-4838, 2001
A;Pitle: Genome Sequence and Comparative Analysis of the Solvent-Producing Bacterium Clc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Residues: 1-447 «KUR»
A;Cross-references: UNIPROT:Q97HK7; GB:AE001437; PIDN:AAK79963.1; PID:g15024986; GSPDB:C
A;Experimental source: Clostridium acetobutylicum ATCC824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical protein ORF63 - saimiriine herpesvirus 1 (strain 11)
C;Species: saimiriine herpesvirus 1
C;Species: bost Saimiri sciureus (common squirrel monkey)
C;Date: 16-Oct-1992 #sequence_revision 16-Oct-1992 #text_change:08-Oct-1999
C;Accession: G36812
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A;Description: Primary structure of the herpesvirus saimiri genome.
A;Reference number: A36806
             A;Status: preliminary; not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-123 <TAG> C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin F;15-98/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                          5; Indels
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Pred. No. 31;
4; Mismatches
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Pred. No. 3.9;
0; Mismatches
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Pred. No. 15;
2; Mismatches
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Best Local Similarity 50.0%;
Matches 7; Conservative '
                                                                                                                                                                                                                                                           55.4%;
                                                                                                                                                                                                                                                                                                                                                                                             2 YIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                            57 YİKYNEKFKĞTİTL 70
                                                                                                                                                                                                                                                               Query Match 55.4
Best Local Similarity 64.3
Matches 9; Conservative
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Best Local Similarity
Matches 7; Conserv
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A;Molecule type: DNA
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A; Accession: G48677
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C;Species: Mus musculus (house mouse)
C;Species: Je May-1994 #sequence_revision 19-May-1994 #text_change 17-Mar-1999
C;Accession: G48677
R;Tassignon, J.; Brait, M.; Jamila, I.; Urbain, J.; Gottlieb, P.; Brown, A.; Hasemann, C
P;Tassignon, J.; Molecular characterization of monoclonal CRI-A-positive anti-arsonate antibodie
A;Reference number: A48677; MUID:94022404; PMID:8415731
                                                                                                                                                                                                                                                                                C;Species: Plasmodium falciparum
C;Species: Plasmodium falciparum
C;Species: Plasmodium falciparum
C;Species: Dlasmodium falciparum
C;Species: Dlasmodium falciparum
C;Date: 30-Sep-1933 #sequence_revision 30-Sep-1993 #text_change 09-Jul-2004
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 09-Jul-2004
C;Accession: A45948
R;Chang, S.P.; Kramer, K.J.; Yamaga, K.M.; Kato, A.; Case, S.E.; Siddiqui, W.A.
B;Xp. Parasitol. 67, 1-11, 1988
A;Title: Plasmodium falciparum: gene structure and hydropathy profile of the major meroz A;Reference number: A45948; MulD:89005525; PMID:3049134
A;Accession: A45948
A;Accession: A45948
A;Molecule type: DNA
A;Residues: 1-1726 -CHA>
A;Accession: C;Reywords: Sep-May A;Accession: A;Acces
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C.Species: Drosophila melanogaster
C.Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A,Accession: S38635
A,Status: preliminary
A,Molacule type: DNA
A,Residues: 1-1333 <FRO>A,Cross-references: UNIPROT:Q24262; EMBL:Z27119; NID:g415797; PID:g415798
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R; Frommer, G.; Schuh, R.; Jdckle, H.
submitted to the EMBL Data Library, November 1993
A; Description: Localized expression of a novel micropia-like element in A; Reference number: $38635
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Pred. No. 30;
3; Mismatches
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60.0%; Pred. No. 32;
Live 4; Mismatches
      Mismatches
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C;Genetics:
A;Gene: FlyBase:micropia
A;Cross-references: FlyBase:FBgn0014947
C;Keywords: polyprotein
             4
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QFVKSNSKVITGLTE 1040
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Best Local Similarity 53.3
Matches 8; Conservative
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Best Local Similarity 60.0

Matches 9; Conservative
                                                                     1 QYIKANSKFI-GITE
          Conservative
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A;Reference number: A64000; MUID:95350630; PMID:7542800
A;Accession: G64026
A;Status: nucleic acid sequence not shown; translation not shown
A;Residues: 1000 acid sequence not shown; translation not shown
A;Residues: 1000 acid sequence not shown; translation not shown
A;Residues: 1000 acid sequence not shown
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A;Residues: 1000 acid sequence not shown
A;Residues: 10
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C, Superfamily: acyl carrier protein phosphodiesterase
C, Keywords: phosphoric diester hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oligopeptidase (EC 3.4.24.-) pepF [validated] - Lactococcus lactis
NiAlternate names: metalloendopeptidase
CiSpecies: Lactococcus lactis
CiDate: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
CiAccession A55485; S49150
CiAccession, A55485; S49150
S. Monnet, V.; Nardi, M.; Chopin, A.; Chopin, M.C.; Gripon, J.C.
J. Biol. Chem. 269, 32070-32076, 1994
J. Biol. Chem. 269, 32070-32076, 1994
J. Title: Biochemical and genetic characterization of PepF, an oligopeptidase from Lactor A; Reference number: A55485
A; Reference number: A55485
A; Robert Status preliminary; translated from GB/EMBL/DDBJ
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A;Residues: 1-601 <RES>
A;Cross-references: UNIPROT:P54124; EMBL:Z32522; NID:g510139; PIDN:CAAB3534.1; PID:g510
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C;Superfamily: oligoendopeptidase F
C;Keywords: hydrolase; metalloproteinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oligoendopeptidase F [imported] - Lactococcus lactis subsp. lactis (strain IL1403)
C;Species: Lactococcus lactis subsp. lactis
C;Species: Lactococcus lactis subsp. lactis
C;Date: 23-Mar-2001 #sequence_revision 23-Mar-2001 #text_change 09-Jul-2004
C;Accession: G86840
R;Bolotin, A.; Wincker, P.; Mauger, S.; Jaillon, O.; Malarme, K.; Weissenbach, J.; Ehrl
A;Title: The complete genome sequence of the lactic acid bacterium Lactococcus lactis s
A;Reference number: A86625; MUID:21235186; PMID:11337471
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A,Molecule type: DNA
A,Residues: 1-601 <STO>
A,Fesidues: 1-601 <STO>
A,Cross-references: UNIPROT: Q9CEV7; GB:AE005176; PID:g12724746; PIDN:AAK05825.1; GSPDB:
A,Experimental source: strain IL1403
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Pred. No. 9.7;
4; Mismatches
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C,Superfamily: oligoendopeptidase F
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Local Similarity 53.3%;
Les 8; Conservative ,
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284 RYIELRKKILGITDL 298
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Best Local S:
Matches 8
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R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew Iller, L.; Grotheck, B.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca, Nature 409, 529-533, 2001
A;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7.
A;Reference number: A65480; MUD:21074935; PMID:11206551
A;Accession: B85794
A;Kesteus: preliminary
A;Molecule type: DNA
A;Residues: 1-79 <STO>
A;Cross-references: UNIPROT:Q8X4G6; GB:AE005174; NID:g12515873; PIDN:AAG56816.1; GSPDB:CCGGenetics:
C;Genetics:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hypothetical protein Z2873 [imported] - Escherichia coli (strain O157:H7, substrain EDLS
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                                                                                                                                                                                                                                                                                                 class II histocompatibility antigen - Atlantic salmon
C;Species: Salmo salar (Atlantic salmon)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 09-Jul-2004
C;Accession: S29980
R;Hordvik, I.
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Algerance number: $29980
Algerance number: $29980
Algerance number: $29980
Algerance number: $29980
Algerance: preliminary
Algerance: preliminary
Algerance: preliminary
Algerance: T-245 ALOR>
Algerance: U-245 ALOR>
Closs-references: UND-ROT:031591; EMBL:X70167; NID:g64371; PID:g64372
Closs-references: Universor in histocompatibility antigen; immunoglobulin homology
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C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Сарв
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124 QYITSNATFTGLSE 137
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QYLHTKSGFLGITD 65
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Best Local Similarity 44.45
Matches 8; Conservative
                                                                           OYIKANSKFIGITE
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Best Local Similarity
Matches 7; Conserv
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R;Giusti, A.M.; Manser, T.
2. Exp. Med. 177, 797-809, 1993
A;Title: Hypermutation is observed only in antibody H chain V region transgenes that hav
d for somatic mutation.
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Species: Musuculus (house mouse)
C;Species: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
C;Accession: PH1516
C;Accession: PH1516
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C;Accession: PH1
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D. Exp. Med. 177, 797-809, 1993

A.Title: Hypermutation is observed only in antibody H chain V region transgenes that have for somatic mutation.

A.Reference number: PH1482; MUID:93171820; PMID:8436910

A.Accession: PH1519

A.Status: translation not shown
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C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
C;Accession: PH1519
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C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;21-104/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Superfamily: immunoglobulin V region; immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 119;
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Pred. No. 8.9;
0; Mismatches
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Pred. No. 8.9;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Keywords: heterotetramer; immunoglobulin F;21-104/Domain: immunoglobulin homology <IMM>
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A, Status: translation not shown
A, Molecule type: DNA
A, Residues: 1-119 < GIU>
A, Experimental source: hybridoma cell
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A;Residues: 1-119 <GIU>
A;Experimental source: hybridoma cell
C;Genetics:
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A,Residues: 1-119 <GIU>
A,Experimental source: hybridoma cell
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64.3%;
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Best Local Similarity 64.3%;
Matches 9; Conservative (
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A;Status: translation not shown
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Best Local Similarity 64...
Best Local 9; Conservative
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A; Description: The sequence of S. cerevisiae cosmid 8179.
A; Reference number: S46732
A; Reference number: S46746
A; Molecule type: DNA
A; Cross-references: UNIPROT: P38694; EMBL: U00062; NID: 9488162; PID: 9488180; GSPDB: GN00008
C; Genetics:
A; Gene: SGD: MSC7; MIPS: YHR039C
A; Gene: SGD: SGD: S001081
A; Map position: 8R
C; Superfamily: NAD-dependent aldehyde dehydrogenase
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C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 03.Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
C;Accession: PH1491
R;Giusti, A.M.; Manser, T.
J. Exp. Med. 177, 797-809, 1993
A;Title: Hypermutation is observed only in antibody H chain V region transgenes that hav for somatic mutation.
A;Reference number: PH1482; MUID:93171820; PMID:8436910
A;Reference number: PH1491
A;Reference number: PH1491
A;Reference number: PH1491
A;Reference number: PH1491
A;Reference number: PH1491
C;Status: translation not shown
A;Residues: 1-102 <GIU-A
A;Residues: 1-102 <GIU-A
A;Residues: 1-102 <GIU-A
A;Residues: 1-102 <GIU-A
A;Residues: 1-102 <GIU-A
C;Superfamily: immunoglobulin V region; immunoglobulin
C;Superfamily: immunoglobulin
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C;Species: Mus musculus (house mouse)
C;Date: 03.Feb-1994 #sequence_revision 03.Feb-1994 #text_change 07-May-1999
C;Accession: PHIS18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Species: Saccharomyces cerevisiae
Date: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 09-Jul-2004;
Accession: S46746
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Score 40; DB 2; Length 601;
Pred. No. 31;
4; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                       hypothetical protein YHR039c – yeast (Saccharomyces cerevisiae)
N;Alternate names: hypothetical protein H8179.19
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   Query Match
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284 RYIELRKKILGITDL 298
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A;Introns: 3/1
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;21-104/Domain: immunoglobulin homology <IMM>
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		Gaps
		; 0
Length 119;		5; Indels
Query Match 52.7%; Score 39; DB 2; Length 119;	Pred. No. 8.9;	0; Mismatches
52.7%;	64.3%;	ative
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² YIKANSKFIGITEL 15 ||| | || || || 63 YIKYNEKFKGKTTL 76

Search completed: January 25, 2005, 06:09:22 Job time : 23.9167 secs

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Perfect score:

Title:

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Sequence:

Scoring table:

Searched:

Database

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Q61v51 photobacter
Cag18824 photobact
Cag22944 photobact
Cag23559 photobact
Q9ykk ateline her
Q25561 plasmodium
P19598 plasmodium
Q764K9 plasmodium
Q764K9 plasmodium
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 26lid6 photobacter
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13-AUG-1987 (Rel. 05, Last sequence update)
13-AUG-2004 (Rel. 45, Last aequence update)
01-OCT-2004 (Rel. 45, Last annotation update)
Tetanus toxin precurenc (EG 2.34.24.68) (Tentoxylysin) (Contains:
Tetanus toxin light chain (Tetanus toxin chain (Tetanus toxin chain H)), Tetanus toxin heavy
Name=tetX; OrderedLocusNames=ctp60;
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
Shumin Z., Dianliang L.;
Submitted (JUN-2011) to the EMBL/GenBank/DDBJ databases.
Submitted (JUN-2011) to the EMBL/GenBank/DDBJ databases.
EMBL; AF389424; AAK72564.2; ...
RGJ; GO:0008233; F:peptidase activity; IEA.
GO; GO:0006508; P:peptidase activity; IEA.
GO; GO:0006508; P:protecolyais and peptidolysis; IEA.
InterPro; IPR011591; Botulinum.
InterPro; IPR011591; Botulinum.
InterPro; IPR000395; Conallike lec_gl.
InterPro; IPR000395; Peptidase_M27.
InterPro; IPR000395; Peptidase_M27.
InterPro; IPR00050; BONTOXILVSIN.
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Last annotation update)
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PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
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SEQÜENCE 1310 AA; 150316 MW; 9EADDC9144
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                 Q6LV51
CAG18824
CAG23559
Q8H8F3
Q9YTK4
Q25YTK4
Q259G1
MSP1 PLAF3
Q764L0
Q764L0
BAD08401
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Best Local Similarity 100.
Matches 15; Conservative
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NCBI_TaxID=1513;
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P04958;
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(1) Q93N27

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Q70dh3 candidatus
Q83538 enterococcu
Q83538 enterococcu
Q95541 salmo salar
Q95542 salmo salar
Q95543 salmo salar
Q955301 mycobacteri
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Q6141 photobacter
Cag23229 photobact
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Q61gm3 photobacter
Q61gm3 photobacter
Cag23341 photobact
Cag23557 photobact
Cag23557 photobact
Cag23568 photobact
Q61gm1 photobacter
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                                                                                                                           January 25, 2005, 06:04:08; Search time 49.5833 Seconds (without alignments) 174.063 Million cell updates/sec
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                 GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                           1825181 segs, 575374646 residues
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Q7VQH3
SYA ENTFA
Q31585
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CAG23229
O6LJK0
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CAG23341
CAG23547
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CAG23558
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Q9CF66
Q9MCL7
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09CRV4
08K2A1
09CYD2
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Gapop 10.0 , Gapext 0.5
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2: uniprot_trembl:*
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Match Length DB
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Score

Result ġ 44.5 44.5 44.5 44.5

43.5

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MEDLINE=93063293; PubMed=1331807; Schlavo G., de Laureto P.P., Schlavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P., Dasgupta B.R., Montecucco C.; "Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteolytic cleavage of synaptobrevin.";
                                                                                     PLASMID=75 Kbp;
MEDLINE=87053814; PubMed=3536478;
MEDLINE=87053814; PubMed=3536478;
Bisel U., Jarausch W., Goretzki K., Henschen A., Engels J., Weller U.,
Hudel M., Habermann E., Niemann H.;
"Tetanus toxin: primary structure, expression in B. coli, and homology
with botulinum toxins.";
EMBO J. 5:2495-2502(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fairweather N.F., Lyness V.A., Pickard D.J., Allen G., Thomson R.O., "Cloning, mucleotide sequencing, and expression of tetanus toxin fragment C in Escherichia coli."; J. Bacteriol. 165:21-27 (1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Krieglstein K., Henschen A., Weller U., Habermann E.;
"Arrangement of disulfide bridges and positions of sulfhydryl groups
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS) OF 874-1314.
MEDLINE=97475217; PubMed=9334741;
Umland T.C., Wingert L.M., Swaminathan S., Furey W.F., Schmidt J.J.,
                                                                                                                                                                                                                                                                                                                                                                "The genome sequence of Clostridium tetani, the causative agent of tetanus disease.",
                                                                                                                                                                                                                                                                                       STRAIN=Massachusetts / E88; PLASMID=pE88;
MEDLINE=22457253; PubMed=12552129; DOI=10.1073/pnas.0335853100;
Brueggemann H., Baeumer S., Fricke W.F., Wiezer A., Liesegang H., Decker I., Herzberg C., Martinez-Arias R., Merkl R., Henne A., Gottschalk G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Tetanus toxin is a zinc protein and its inhibition of neurotransmitter release and protease activity depend on zinc."; EMBO J. 11:3577-3583 (1992).
Plasmid pE88, and Plasmid 75 Kbp.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Krieglstein K.G., Henschen A.H., Weller U., Habermann E.;
"Limited proteolysis of tetanus toxin. Relation to activity and
identification of cleavage sites.";
Eur. J. Biochem. 202:41-51(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schiavo G., Poulain B., Rossetto O., Benfenati F., Tauc L.,
                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN=CN1911; PLASNID=75 Kbp;
MEDLINE=87040747; PubMed=3774547;
Fairweather N.F., Lyness V.A.;
"The complete nucleotide sequence of tetanus toxin.";
Nucleic Acids Res. 14:7809-7812(1986).
                                                                                                                                                                                                                                                                                                                                                                                tetanus disease.";
Proc. Natl. Acad. Sci. U.S.A. 100:1316-1321(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PARTIAL SEQUENCE, AND DISULFIDE BONDS. MEDLINE=90201034; Pubmed=2108021;
                                                                                                                                                                                                                                                                                                                                                                                                                              PLASMID=75 Kbp;
MEDLINE=86085672; PubMed=3510187;
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MEDLINE=92037649; Pubmed=1935979;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTIFICATION AS ZINC-PROTEASE.
MEDLINE=93010948; PubMed=1396558;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in tetanus toxin.";
Eur. J. Biochem. 188:39-45(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 742-1314 FROM N.A.
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                                                                           SEQUENCE FROM N.A.
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                                                  NCBI_TaxID=1513;
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMED outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                Nat. Struct. Biol. 4:788-792(1997).

-I. Struct. Biol. 4:788-792(1997).

-I. FUNCTION: Tetamus toxin acts by inhibiting neurotransmitter release. It binds to peripheral neuronal synapses, is internalized and moves by retrograde transport up the axon into the spinal cord where it can move between postsynaptic and presynaptic neurons. It inhibits neurotransmitter release by acting as a zinc endopeptidase that catalyzes the hydrolysis of the 76-Gln-|-Phe-77 bond of synaptobrevin-2.

-I. CATALYTIC ACTIVITY: Hydrolysis of 76-Gln-|-Phe-77 bond in
                                                                                                                                                                                                                                                                                                                                                                                                                                        synaptobrevin 2.

COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: The precursor polypeptide is subsequently cleaved to yield subchains L and H. These remain linked by a disulfide bridge and are non-toxic after separation.

MISCELLANEOUS: The C-terminus of the heavy chain binds to
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Zinc (catalytic) (By similarity)
'Structure of the receptor binding fragment HC of tetanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tetanus toxin light chain. Tetanus toxin heavy chain.
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PIR; A25689; BTCLTN.
PDB; 1ABD; X-ray; @=863-1314.
PDB; 1DOH; X-ray; @=863-1314.
PDB; 1DOH; X-ray; A=864-1314.
PDB; 1DC; X-ray; A=871-1314.
PDB; 1DL; X-ray; A=871-1314.
PDB; 1FV2; X-ray; A=874-1314.
PDB; 1FV2; X-ray; A=874-1314.
PDB; 1FV2; X-ray; A=874-1314.
PDB; 1FV2; X-ray; A=874-1314.
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EMBL; X06214; CAA29564.1; -.
EMBL; AF528097; AAO37454.1; -.
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                                                                                                     The dimer (By similarity).

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The STBUNIT: Homodimer (By similarity).

The STBULINITAR IOCATION: Cytoplasmic (By similarity).

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -i - CATALYTIC ACTIVITY: ATP + L-alanine + tRNA(Ala) = AMP + diphosphate + L-alanyl-tRNA(Ala).
-i - SUBCELLULAR LOCATION: CYCOPlasmic.
-i - SIMILARITY: Belongs to class-II aminoacyl-tRNA synthetase family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Enterococcus faecalis (Streptococcus faecalis).
Bacteria; Firmicutes; Lactobacillales; Enterococcaceae; Enterococcus.
    genome sequence of Blochmannia floridanus: comparative analysis
                                                 c. Natl. Acad. Sci. U.S.A. 100:9388-9393(2003).
CATALYTIC ACTIVITY: 2-phospho-D-glycerate = phosphoenolpyruvate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-MAR-2004 (Rel. 43, Created)
29-MAR-2004 (Rel. 43, Last sequence update)
20-IOCT-2004 (Rel. 45, Last annotation update)
Alanyl-tRNA synthetase (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)
Name-alaS; OrderedLocusNames=EF1379;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Length 447;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Complete proteome, Glycolysis, Lyase, Magnesium.
SEQUENCE 447 AA; 49005 MW; 465B69C3273C7AC4 CRC64;
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Pred. No. 11;
5; Mismatches
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Science 299:2071-2074(2003).
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STRAIN=V583 / ATCC 700802;
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                                  of reduced genomes.
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                                                   Proc. Natl.
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Bacteria, Proteobacteria, Gammaproteobacteria, Enterobacteriales,
Enterobacteriaceae, ant endosymbionts; Candidatus Blochmannia.
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Latorre A., Rausell C., Kamerbeek J., Gadau J., Hoelldobler B.,
van Ham R.C.H.J., Gross R., Moya A.;
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01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Enolase (EC 4.2.1.11).
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Pred. No. 0.00021;
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MEDLINE=22784745; Pubmed=12886019;
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WEDLINE=1183619; PubMed=11491536; Langefors A., Lohm J., von Schantz T.; Langefors A., Lohm J., von Schantz T.; Langefors A., Lohm J., von Schantz T.; Langefors A., Lohm J., von Schantz T.; Langefors Balmon (Salmo salar)."; Atlantic salmon (Salmo salar)."; Limmunogenetics 53:329-336(2001).

EMBL; AF104370; AAL04002.1; -. RGO; GO:0045012; F:MHC Class II to membrane; IEA.

GO; GO:0045012; F:MHC Class II receptor activity; IEA.

GO; GO:0045012; F:MHC Class II receptor activity; IEA.

GO; GO:0045986; P:antigen presentation, exogenous antigen via M. ..; RGO; GO:006955; P:immune response; IEA.

RO; GO:0006955; P:immune response; IEA.

RO; GO:0006959; MHC II beta.

R Pfam; PF00969; MHC II beta.

R ProDom; PD000328; MHC II beta.

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                                                                                                                                 Described FROM N.A.

Dorschner M.O. Duris T., Phillips R.B.;

Loudilted (FEB-1999) to the EMBL/GenBank/DDBJ databases.

Loudilted (FEB-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AF130026; AAD20889.1; -.

EMBL; AF130026; AAD20889.1; -.

GO; GO:0016021; C:Integral Lo membrane; IEA.

GO; GO:0014884; P:antigen presentation, exogenous antigen; IEA.

GO; GO:0019884; P:antigen processing, exogenous antigen via M. ..

GO; GO:0006955; P:immune response; IEA.

R GO; GO:0006955; P:immune response; IEA.

R InterPro. IPR000353; MHC II beta; 1.

R ProDom; PD000328; MHC II beta; 1.

R ProDom; PD000328; MHC II beta; 1.

R GIycoprotein; MHC II beta; 1.

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Actinopterygii; Neopterygii; Teleostei; Buteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
                     Salvelinus namaycush (lake trout).
Wataryota; Metacoa; Chordets, Cranista; Vertebrata; Euteleostomi; Actinopterygii, Neopterygii; Teleostei; Euteleostei; Evetacanthopterygii; Salmoniformes; Salmonidae; Salvelinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 44.5; DB 2; Length 71; Pred. No. 3.3;
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
MHC class II B antigen (Fragment).
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Pred. No. 4;
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14 EYIRFNSTVGKFVGYTEL 31
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Matches 10; Conservative
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Best Local Similarity
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TIGREAMS; TIGRO0344; alaS; 1.
PROSITE; PS50860; AA_TRNA_LIGASE II_ALA; 1.
Aminoacyl-tRNA synthetase; ATP-bInding; Complete proteome; Ligase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-2003 (TrEMBLrel. 24, Last annotation update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Salmo salar (BAlantic salmon).
Salmo salar (Atlantic salmon).
Actinopterygii, Neopterygii, Treleostei; Buteleostei;
Protacanthopterygii, Salmoniformes; Salmonidae; Salmo.
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                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 880, 21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grimholt U., Olsaker I., de Vries Lindstrom C., Lie O.; Submitted (OCT-1993) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                 97887 MW; EF23ED1229B6683F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60 AA; 6776 MW; 5D4F3449060940E2 CRC64;
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(TrEMBLrel. 12, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
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3; Mismatches
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                                     TICR, FF1379; -.
HAWAP; MF_00036; -; 1.
InterPro; IPR003156; Pesterase DHHA1.
InterPro; IPR002318; tRNA-synt_2c.
InterPro; IPR006193; tRNA-synt_Ala.
Pfam; PF02272; DHHA1; 1.
Pfam; PF01411; tRNA-synt_Ala.
                                                                                                                                                                                                                                                                                                                                                           69.2%; Score 46; 69.2%; Pred. No.
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16 EYIRFNSTVGKFVGYTEL 33
                  EMBL; AE016951; AA081170.1;
TIGR; EF1379; -.
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Best Local Similarity 55.6%;
Matches 10; Conservative
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Matches 9; Conservat
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MEDLINE-93170890; PubMed-8436418;
HOTAVIX I., Grimholt U., Fosse V.M., Lie Y., Endresen C.;
HOTAVIX I., Grimholt U., Fosse V.M., Lie Y., Endresen C.;
HOTALDS and sequence analysis of CDNAs encoding the MHC class II a-
chain in Atlantic salmon, Salmo salar.";
Immunogenetics 37:437-441[1993).
EMBL, X70166; CAA49725.1; -.
HIR, S29982; S29982.
HIR, S29982; ELESO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Salmo salar (Atlantic salmon).
Wetaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
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           exogenous antigen via M.
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                                                                                                                                                                                                             Score 44.5; DB 2; Length 86; Pred. No. 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | GO; GO: 0016025; P: imembrane; IEA. |
| GO; GO: 0016025; P: imembrane; IEA. |
| GO; GO: 0016025; P: immune response; IEA. |
| InterPro: IPR007159; Ig cl. |
| InterPro: IPR001359; Ig cl. |
| InterPro: IPR001359; MHC_II_beta. |
| Pfam; PP07654; Cl-set; 1. |
| Pfam; PP07654; Cl-set; 1. |
| ProDom; PD000328; MHC_II_beta; 1. |
| ProDom; PR000038; MHC_II_beta; 1. |
| ProDom; PR00007; IGcl; 1. |
| ProDom; PR00007; IGcl; 1. |
| RV0ITE; PS00005; IG_IIKE; 1. |
| Glycoprotein; MHC II; Transmembrane. |
| SEQUENCE 244 AA; 27449 MW; 496CB9EA9D73765C CRC64; |
                                                                                                                                                                                                                                                                2; Indels
                                                                                                                                                                          86 AA; 9912 MW; E5097729F681F149 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
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(Rel. 28, Last sequence update)
(Rel. 44, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         244 AA
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                                                                                                                                                                                                                                                              3; Mismatches
  GO; GO:0019886; P:antigen processing, exc GO:0006955; P:immune response; IEA. InterPro; IPR00353; MHC II_beta. Pfam; PF00969; MHC II_beta; I. ProDom; PD000328; MHC II_beta; I. ProDom; PD000328; MHC II; Deta; I. Glycoprotein; MHC II; Transmembrane. NOW TER 1 1 1 1 NOW TER 86 86 SEQÜENCE 86 AA; 9912 MW; E5097729F681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                33 EYIRFNSTVGKFVGYTEL 50
                                                                                                                                                                                                                                                                                                        1 QYIKANS---KFIGITEL 15
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55.6%;
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                                                                                                                                                                                                  Query Match
Best Local Similarity 55.6'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MHC class II.
Name=Mhc-Sasa class II B;
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Matches 10; Conservative
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VG84 BPML5
ID VG84 BPML5
AC Q05301,
DT 01-FBB-1994
DT 05-JUL-2004 (
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Q31590;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                          Landry C., Bernatchez L.;
"Comparative analysis of population structure across environments and geographical scales at major histocompatibility complex and microsatellite loci in Allanic salmon (Salmo salar).";
Mol. Ecol. 10:2525-2539(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                          01-DEC-2001 (TrEMBLrel. 19, Created)
01-MAR-2004 (TrEMBLrel. 19, Last sequence update)
MHC class II beta chain (Fragment).
Salmo salar (Atlantic salmon).
Actinopterygii, Neopterygii; Teleostei; Euteleosteii, Protaccanthopterygii; Salmoniformes; Salmonidae; Salmonidae; Salmonidae; Salmonidae; Salmonidae; Salmonidae; Salmoniformes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL, AP37369: ARG1882.1;

GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0018012; F:MHC class II receptor activity; IEA.

GO; GO:0019884; P:antigen presentation, exogenous antigen; IEA.

GO; GO:0019886; P:antigen processing, exogenous antigen; IEA.

GO; GO:0019886; P:antigen processing, exogenous antigen; IEA.

GO; GO:0019886; P:immune response; IEA.

InterPro; IPR00035; P:immune response; IEA.

ProDom; PD000328; MHC_II_beta; I.

ProDom; PD000328; MHC_II_beta; I.

RoDom; PD000328; MHC_II_beta; I.

RoDom; PD000328; MHC_II_beta; I.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85 AA; 9743 MW; 3214E01AD1B66AC5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
MMC class II B antigen (Fragment).
                                                                                                                                85 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86 AA
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1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60.1%; Score 44.5; 55.6%; Pred. No. 4;
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  EYIRFNSTVGKFVGYTEL
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Matches 10; Conservative
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NCBI_TaxID=1360;
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01-NOV-1996
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NON TER
SEQUENCE
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                      RESULT 13
Q31578
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                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the butopean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                        Hatfull G.F., Sarkis G.J.;
"DNA sequence, structure and gene expression of mycobacteriophage L5:
a phage system for mycobacterial genetics.";
Mol. Microbiol. 7:395-405(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE=20087226; PubMed=10618395;
Zauner S., Fraunholz M., Wastl J., Penny S.L., Beaton M.,
Cavalier-Smith T., Maier U., Douglas S.;
"Chloroplast protein and centroscomal genes, a tRNA intron, and odd telomeres in an unusually compact eukaryotic genome, the cryptomonad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                    Gaps
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EMBL, AJ010592; CAB40403.1; -.
                      dycobacteriophage L5.
Viruses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae;
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Pred. No. 3.8;
2; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical protein.
SEQUENCE 546 AA; 66218 MW; 7303950F632BE6F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical protein.

Guillardia theta (Cryptomonas phi).

Eukaryota, Cryptophyta, Cryptomonadaceae, Guillardia.

NCBI_TaxID=55529;
                                                                                                                                                                                                                                                                                     66 AA; 7424 MW; 9C7104C7A4FA74A5 CRC64;
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Last annotation update)
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Pred. No. 30;
6; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleomorph.";
Proc. Natl. Acad. Sci. U.S.A. 97:200-205(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
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MEDLINE=21223349; PubMed=11323671;
                                                                                              MEDLINE=93211282; PubMed=8459766;
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445 FIKSNSRFMRLTEI 458
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Best Local Similarity 57.1
Matches 8; Conservative
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Gene 84 protein (GP84)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
7; Conserve
                                                                                   SEQUENCE FROM N.A.
                                                       NCBI_TaxID=31757;
                                                L5-like viruses.
                                                                                                                                                                                                                                                                                    SEQUENCE
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Bolotin A., Wincker P., Manger S., Jaillon O., Malarme K., Weissenbach J., Ehrlich S.D., Sorokin A.;
"The complete genome sequence of the lactic acid bacterium Lactococcus lactis spp. lactis ILI403.";
Genome Res. 11:731-753(2001).
EMBL, AR006391, AAK05713.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us lactis (subsp. lactis) (Streptococcus lactis).
Firmicutes; Lactobacillales; Streptococcaceae; Lactococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
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GO; GO:0004145; F:diamine N.acetyltransferase activity; IEA.
GO; GO:0016740; F:tansferase activity; IEA.
InterPro; IPR000182; GGNSacetyl trans.
PF00583; Acetyltransf_l; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 43.5; DB 2; Length 67; Pred. No. 4.8;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                     Grimholt U., Olsaker I., de Vries Lindstrom C., Lie O.; Submitted (OCT-1993) to the EMBL/GenBank/DDBJ databases. EMBL; L24929; AAA49590.1; -.
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01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUNAR-2004 (TrEMBLrel. 26, Last annotation update)
Spermidine acceyltransferase (EC 2.3.1.57).
Name=yqfF; OrderedLocusNames=LL1615;
                                                                    01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-UUN-2003 (TrEMBLrel. 24, Last annotation update)
Salmo salar (DB03) MHC Class II beta 1 (Fragment).
Salmo salar (Atlantic salmon).
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67 AA.
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                                              Created)
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PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lactococcus lactis (subsp. lactis)
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                                              (TrEMBLrel. 01,
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PRELIMINARY;
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SEQUENCE FROM N.A.
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STRAIN-ESTSEL/GO; TISSUE=Head;
MEDLINE=20499374; PubMed=11042159;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Komno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN=CS7BL/6J; TISSUE=Head;
MEDLINE=20530913; PubMed=11076861;
Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus muscúlus (Mouse).
Sukaryota: Metazoa, Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-WAR-2003 (TrEMBLrel. 23, Last sequence update)
01-WAR-2004 (TrEMBLrel. 26, Last annotation update)
01-WAR-2104 (TrEMBLrel. 26, Last annotation update)
11-WAR-2104 (TrEMBLrel. 26, Last annotation update)
11-WAR-2104 (TrEMBLrel. 26, Last annotation update)
11-WAR-2104 (TrEMBLrel. 23, Last sequence update)
11-WAR-2104 (TrEMBLrel. 23, Last sequence update)
11-WAR-2104 (TrEMBLrel. 23, Last sequence update)
13-WAR-2104 (TrEMBLrel. 26, Last sequence update)
13-WAR-2104 (TrEMBLrel. 26, Last sequence update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        / Match 58.1%; Score 43; DB 2; Length 252; Local Similarity 57.1%; Pred. No. 22; local Similarity 57.1%; Pred. No. 22; local 8; Conservative 2; Mismatches 4; Indels
           (FEB-2000) to the EMBL/GenBank/DDBJ databases,
                                                                                                                                                                                                                                                                                                                                                                                                                                      4D5A59FF47363948 CRC64;
                                                                                                                  IEA
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STRAIN=C57BL/6J; TISSUE=Head;
MEDLINE=99279253; Pubmed=10349636;
MEDLINE=19279253; Pubmed=10349636;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             291 AA.
                                 EMBL; AF109874; AAD37103.1;
GO; GO:0003677; F:DNA binding; IEA.
GO; GO:0008170; F:N-mechyltransferase act
GO; GO:0006306; P:DNA methyltransferase act
InterPro; IPR002295; D21N6 mitrase.
InterPro; IPR002291; N6/N4 Mtase.
InterPro; IPR00291; N6/N4 Mtase.
PRINTS; PR00556; D21N6WTFRASE.
PRINTS; PR00508; S21N4MTFRASE.
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STRAIN=CS7BL/6J; TISSUE-Head;
MEDLINE=21085660; PubMed=11217851;
RIKEN FANTOM CONSORTIUM;
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STRAIN=C57BL/6J; TISSUE=Head;
The FANTOM Consortium,
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                                                                                                                                                                                                                                                                                                                                                                                                 Methyltransferase.
SEQUENCE 252 AA;
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SEQUENCE FROM N.A.
van Sinderen D., van de Guchte M., Seegers J.F.M.L., Fitzgerald G.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G.F.;
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                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Identification of four loci isolated from two Streptococcus thermophilus phage genomes responsible for mediating bacteriophage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Streptococcus thermophilus bacteriophage 7201.
Viruses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae.
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Viruses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 250;
                                            Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=20088830; PubMed=10620678;
Stanley E., Walsh L., van der Zwet A., Fitzgerald G.F.,
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EMBL; AF14504; AAF43506.1; -
GO; GO:0003677; F:DNA binding; IEA.
GO; GO:0003170; F:DNA binding; IEA.
GO; GO:0008170; F:DNA methylation; IEA.
InterPro; IPR00295; D21N6_mtfrase.
InterPro; IPR00295; D21N6_mtfrase.
InterPro; IPR002941; N6/N4_mtase.
Pfam; PR01555; N6 N4_mtase; I.
PRINTS; PR00506; D21N6mtFRASE.
PRINTS; PR00506; D21N6mTFRASE.
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Last annotation update)
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01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
                                        3;
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22;
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       ed. No. 16;
Mismatches
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Pred. No.
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57.1%;
69.2%;
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Best Local Similarity 57.14
Best Local 8; Conservative
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                                 9; Conservative
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   Best Local Similarity
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RESULT 16

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SEQUENCE FROM N.A.

Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
Adachi J., Aizawa K., Atahira S., Pukuda S., Fukunishi Y., Furuno M.,
A rakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Kato H.,
A motani K., Ishii Y., Itoh M., Izawa M., Koya S., Kurihara C.,
A kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
A kawai J., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
A chazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai K.,
Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Takahashi F., Tanaka T.,
A Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
Muramatsu M., Hayashizaki Y.;
Bubmitted (JUL. 2000) Lo the BubL/Genbank/DDBJ databases.

EMBL; AKA1409; BAB29151.2;
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Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Samamoto R., Matsumoto H., Sakaguchi S., Itsegami T., Kashiwagi K., Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahixi M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; Rawai J. Rikim integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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32802 MW; 91FF3F41CD0BC6F2 CRC64;
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PROSITE; PS00687; ALDEHYDE_DEHYDR_GLU; UNKNOWN_1.
PROSITE; PS0179; P1D; 1.
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Matches 8; Conservative
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Name=Gulpl;
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Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Kroyvinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.; Green E.D., Dickson M.C., Grimwood J., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.; and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus (Rabys embryo whole body CDNA, RIKEN full-length enriched library, clone:5736529006 product:CED-6 PROTEIN homolog.
                                                                                                                                                                                                                  IISSUE=Mammary tumor metastatized to lung. Tumor arose spontaneously;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Functional amnotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2; Length 304;
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"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
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; Pred. No. 26;
3; Mismatches
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InterPro; IPR002086; Aldehyde_dehydr.
InterPro; IPR011036; PH related.
InterPro; IPR006020; PTB_PID.
Pfam; PP00640; PID; 1.
SMART; SM00462; PTB; 1.
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01-JUN-2001 (TrEMBLrel. 17, Last seq
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SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Whole body;
MEDLINE=21085660; Pubmed=11217851;
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STRAIN-C57BL/6J; TISSUE-Whole body;
MEDLINE-99279253; PubMed=10349636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   y Match
Local Similarity 57.1%;
hes 8; Conservative
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the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length CDNAs."; Nature 420:563-573 (2002).

[3] SEQUENCE FROM N.A. STRAIN=C57BL/6J; TISSUE=Whole body; The FANTOM CONSOTTIUM,

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"Genome analysis of Photobacterium profundum reveals the complexity of
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                  Vezzi A., Campanaro S., D'Angelo M., Simonato F., Vitulo N., Lauro F.,
Céstaro A., Malacrida G., Simionati B., Cannata N., Bartlett D.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Photobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
Vibrionaceae; Photobacterium.
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Mane=TNRR, OrderediocusNames=PBPRB0657;
Name=TNRR, OrderediocusNames=PBPRB0657;
Paptobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
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                                                                                                                                                                                                                                                          58.1%; Score 43; DB 2; Length 361; 56.2%; Pred. No. 31;
                                                                                                                                                                                                                                                                                               1; Indels
                                                                                           high pressure adaptations.";
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; CR378679; CAG23229.1;
InterPro; IPR002559; Transposase_11.
Pfam; PF01609; Transposase_11; 1.
Complete proteome; HypotheTical protein.
SEQUENCE 361 AA; 42657 MW; EB1AA30A2A4AB10 CRC64;
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Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases
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Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; CR378679; CAG23229.1; -.
Hypothetical protein.
SEQUENCE 361 AA; 42657 MW; EE1AA30A2A44AB10 CRC64;
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10-WAY-2004 (TrEMBLrel. 27, Last sequence update)
10-MAY-2004 (TrEMBLrel. 27, Last annotation update)
Hypothetical bacterial IS-element.
SF2983 OR PBPRB1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QGLJKO;
05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361 AA.
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206 FIKANSKPKYVGFTQL 221
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206 FIKANSKPKYVGFTQL 221
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Best Local Similarity 50.2.
Local 9; Conservative
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SEQUENCE FROM N.A.
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                                                                                                                                                                                                        STRAIN-C57BL/61; TISSUE-Whole body;

MEDLINE-20530913; PubMed=11076861;
Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Warahiki M., Yoneda Y., Ishikawa T., Cawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

"RIKEN integrated sequence analysis (RISA) system-384-format
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05-ULI-2004 (TrEMBLrel. 27, Last sequence update)
05-ULI-2004 (TrEMBLrel. 27, Last annotation update)
Hypothetical bacterial IS-element.
Name=SF2983; OrderediocusNames=PBRB1358;
Photobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
Vibrionaceae; Photobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58.1%; Score 43; DB 2; Length 309; 57.1%; Pred. No. 27; ive 3; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                 sequencing pipeline with 384 multicapillary sequencer.";
Genome Res. 10:1757-1771(2000).
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PROSITE; PSO1179; PID; 1.
SEQUENCE 309 AA; 35272 MW; 535DD8E733C0F406 CRC64;
                                 STRAIN-C57BL/6J; TISSUE=Whole body; MEDLINE-20499374; PubMed=11042159;
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SMART; SM00462; PTB; 1
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Name=SF2983; OrderedLocusNames=PBPRB1708;
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                                                                          SEQUENCE FROM N.A.
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                                                 NCBI_TaxID=74109;
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                                                                                    "Genome analysis of Photobacterium profundum reveals the complexity of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vezzi A., Campanaro S., D'Angelo M., Simonato F., Vitulo N., Lauro F., Cestaro A., Malacrida G., Simionati B., Cannata N., Bartlett D.,
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                                                 Lauro
D.,
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                                                Vezzi A., Campanaro S., D'Angelo M., Simonato F., Vitulo N., Cestaro A., Malacrida G., Simionati B., Cannata N., Bartlett
                                                                                                                                                                                                                                                                                                                                                                                                              Photobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales; Vibrionaceae; Photobacterium.
                                                                                                                                                                                              58.1%; Score 43; DB 2; Length 394; 56.2%; Pred. No. 34; tive 4; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 58.1%; Score 43; DB 2; Length 394; Best Local Similarity 56.2%; Pred. No. 34; Matches 9; Conservative 4; Mismatches 1; Indels
                                                                                             high pressure adaptations.";
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL, CA378677; CAG22530.1;
InterPro; IPR002559; Transposase_11.
Fiam; PF01609; Transposase_11; 1.
Complete proteome; HypotheTical protein.
SEQUENCE 394 AA; 47092 MW; SC04F2C6AEA21CE8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cestaro A.;
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; CR378677; CAG22530.1; -.
Hypothetical protein.
SEQUENCE 394 AA; 47092 MW; 5C04F2C6AEA21CE8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       high pressure adaptations.";
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                       10-MAY-2004 (TrEMBLrel. 27, Created)
10-MAY-2004 (TrEMBLrel. 27, Last sequence update)
10-MAY-2004 (TrEMBLrel. 27, Last annotation update)
Hypothetical transposase.
TNPR OR PBPRB0657.
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05-JUL_2004 (TrEMBLrel. 27, Last sequence update)
05-JUL_2004 (TrEMBLrel. 27, Last annotation update)
Hypothetical transposase of Tulo.
                                                                                                                                                                                                                                                                                                                                  394 AA
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les 9; Conserv
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          NCBI_TaxID=74109;
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                                                                      Valle G.;
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CAG22530;
                                  SEQUENCE
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Matches
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Cestaro A., Malacrida G., Simionati B., Cannata N., Bartlett
Valle G.;
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Cestaro A., Malacrida G., Simionati B., Cannata N., Bartlett
Valle G.;
Photobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
Vibrionaceae; Photobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Photobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 395;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                             high pressure adaptations.";
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL, CR378680; CRG235681;
InterPro; IPR002453; Beta_tubulin.
InterPro; IPR002559; Transposase_11.
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfan; PF01609; Transposase 11; 1.
PROSITE; PS00228; TUBULIN B AUTOREC; UNKNOWN 1.
Complete proteome; Hypothetical protein.
SEQUENCE 395 AA; 46807 WW; F380D2F4B3C3F4SC CRC64;
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PROSITE; PS00228; TUBULIN B AUTOREG; UNKNOWN 1.
Complete proteome; Hypothefical protein.
SEQUENCE 395 AA; 46793 MW; D710D7205853FCC1 CRC64;
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05-JUL_2004 (TrEMBLrel. 27, Last sequence update)
05-JUL_2004 (TrEMBLrel. 27, Last annotation update)
Hypotherical transposase of Th10.
Name=SF2983; OrderedLocusNames=PBPRB1697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 43; DB 2;
Pred. No. 34;
4; Mismatches
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Job time : 51.5833 secs
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202 FIKANSKPKYVGFTQL 217
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Best Local Similarity 56.2%;
Matches 9; Conservative
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Abg31774 T helper Abg72721 Tetanus t Abg725694 Tetanus t	Tetanu Tetanu	-0-5	Adm06894 Teranus t Adp02883 Teranus t Adp02898 Fusion pr Adp02876 Teranus t	Tetanus Tetanus Promiscu	Adp76011 Peptide e Aaw35445 T-cell st	Aayzy/Os Clostridi Aaul1413 Tetanus t Aau93865 Clostridi	Ade10941 Chimeric Adk41128 Tetanus t	Adm39833 C tetanı Adg64012 Recombina Aac24402 HLA-A24-r Ado43877 Amino aci	Adp73582 Clostridi Adp90539 Helper pe Aar62692 Helper T	Tetanus T-cell a Tetanus	Aay99274 HiA class Aay58768 Unidentif Aay80056 Pathogen Aay54539 T helper		Amino	Aag62904 Amino aci Aab15589 Peptide 5 Aae35609 Clostridi	Ada09238 Tetanus t Adm80624 Human hel	Tetan	Aayz66U/ H1V-deriV Abb09794 Peptide T	HLA Vac	Adh09986 Modified Aab46196 Tetanus t	Aab46175 Tetanus t	Aab46203 Human APP	Adpuzsus rusion pr Adp02900 Fusion pr	Adp02919 Fusion pr Aav92650 PSMpep007	Aay92652 PSMpep009	Aay92651 PSMpepous Aab49092 Amyloid b	Aar62701 LHRH-cont Aar82596 IGE CH4 r	Amyloi	Add89947 LHRH pept Add56906 Human LHR	22 Synthe
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March Marc	Aao30457 hIL5-P30-Aao30459 hIL5-P30-Aao30469 hIL5-P30 v Aao30460 hIL5-P30 v Aao30460 hIL5-P30 v Aao30460 hIL5-37 v Aao30490 Human TNF Aao30490 Human TNF Aao30499 Human TNF Aao30499 Human TNF Aao30499 Human TNF Abr82419 Modified Abr82419 Modified Abr82479 Modified Aby92631 Mutant hu Aay92631 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92630 Mutant hu Aay92634 Mutant hu Aay92634 Mutant hu Aay92634 Mutant hu Aay92634 Mutant hu Aay92634 Mutant hu Aay92634 Mutant hu Aay92634 Mutant hu Aay92634 Mutant hu Aay92636 Mutant hu Aay9263 Mutant hu Aay9263 Mutant hu Aay9263 Mutant hu Aay9263 Mutant hu Aay9263 Mutant hu A	
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corresponding amino acid residue in the parent peptides. For example, retroinverse peptides, provided that the immunoretropeptides or retroinverse peptides, provided that the immunoretroids are capable of forming complexes with the antimumoretroid antibodies and with antibodies directed against the parent proteins and/or the parent peptide enantioners or parent proteins and/or the parent peptide enantioners or parent protein enantioners. The immunoretroids are used to prepare medicaments for preventing or treating pathologies associated with the prement of implicated directly or indirectly in the appearance and/or development of the pathologies. Immunoretroids can also be used to prepare vaccines for preventing pathologies associated with the presence of an exogenous or conformation protein recognised by antibodies directed against an immunoretroids. Comparisons containing immunoretroids associated with a immunoretroids containing immunoretroids associated with a immunoretroids. Comparisons containing immunoretroids associated with a carrier molecule capable of inducing production of antibodies against an
                                                                                                                                                                                                                                                                                                                                                                                         exogenous or endogenous protein responsible for a pathology, or of inducing a cytotoxic cellular immune response are useful as vaccines. Pathologies that can be diagnosed or treated are especially viral or baccerial infections, autoimmune diseases and neurodegenerative diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic DNA coding for the wild-type universal Th epitope from tetanus toxoid, designated TT830, was fused to the 3'-end of DNA encoding heavy chain sequences from the humanised anti-Fc gamma RI monoclonal antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Recombinant, multi-specific anti-Fc receptor antibody molecules - also comprise an anti-target portion, used for the treatment of cancer, autoimmune disease and pathogenic infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Humanised antibody; anti-Fc receptor; H22; bifunctional; bispecific;
fusion protein; chimera; tetanus toxoid; helper T cell epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence represents a cytotoxic T epitope related retro-partly inverso peptide relating to the retropeptides of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 74; DB 2; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Graziano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW11505 standard; protein; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96WO-US009988
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1997-052242/05.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAT58127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9640789-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-JUN-1995;
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                                                                                                                                                                                                             Epitopic peptides may be used with synthetic hapten derived from a pathogen to generate an immune response to the pathogen. Peptides are recognised by numerous T-helper cell clones within the context of a wide range of alleles of the human MHC. The peptides may be used in an antimalarial vaccine inducing Ab. response to P.falciparium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Therapeutic and diagnostic uses of retro peptide analogues - corresp. to parent peptide chains with CONH linkages replaced by NHCO linkages, also antibodies against the peptide(8).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            immunoretroid antibodies, where the immunoretroids are peptide analogues in which one or more (preferably all) of the CONH linkages in the chain of the corresponding parent peptides are replaced by NHCO linkages and the chirality of each amino acid residue, whether involved in NHCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunoretroid; anti-immunoretroid; CONH linkage; NHCO linkage; retropeptide; retroinverse peptide; vaccine; viral; bacterial infection; autoimmune disease; neurodegenerative disease; retro-partly;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This invention relates to the novel uses of 'immunoretroids' or anti-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                      tetanus toxin epitope(s) - used as immunogenic conjugate(s) for use as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cytotoxic T epitope retro-partly inverso peptide TT830-844.
                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 2; Length 15; larity 100.0%; Pred. No. 9.4e-07; Conservative 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADB87354 standard; peptide; 15 AA.
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                                                                      Synthetic peptide(s) corresp. to universal carriers for prepn. of
                                                                                                                                                                  Claim 1; Page 17; 20pp; English.
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                    WPI; 1990-225582/30.
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                  Sequence 15 AA;
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Modified-site
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                                                                                                                         vaccines.
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Gaps

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through a linker to a solid phase, forming a complex of (A)-solid phase.

Through a linker to a solid phase, forming a complex of (A)-solid phase.

Through a linker to a solid phase, forming a complex of (A)-solid phase.

Through a linker to a solid phase capable of forming a secondary structure in a benign buffer after liberation from the solid phase, and further the (A)-solid phase complex comprises an immunogenic substance and/or an immune mediator coupled on (A). The present sequence represents a peptide used in an example from the present invention. An (A)-solid phase complex can be used as a scaffold for the production of chemical catachent points. Alternatively (A) is used as a scaffold-peptide for attachent points. Alternatively (A) is used as a scaffold-peptide for the incorporation into an Immunostimulating Complex (Iscom) resulting an (A)-Iscom complex which is used for the chemical coupling of antigenic substances in an aqueous solution by conjugation. (A) derivatised with one or more peptides having fibronectin-laminin- or vitronectin-like binding activities can be used for the promotion of cell-attachment to blastic surfaces, in particular to inhibit tumour growth and metastasis, and for promotion of wound healing. Also a derivatised (A) can be used for the selection of specifically-binding aptamers or as a diagnostic agent. Such diagnostic-(A) molecules could be used to detect molecules
                                                                                                                                                                                                                                          ö
H22. The resulting fusion protein was shown to be significantly more efficient in antigen presentation and T cell stimulation that the TT830 epitope alone. A similar fusion construct was prepared coding for a mutant, antagonistic form of the epitope (designated TT833S) fused to the anti-Fc gamma RI. The Fab22-TT833S is at least 100 times more effective than TT833S in inhibiting T cell activation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    T-cell stimulatory peptide; immunogen; non-dendritic; carrier; tumour; scaffold; inhibition; metastasis; wound healing; solid phase.
                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Non-dendritic peptide carrier linked to a solid phase - useful as a diagnostic agent and as a scaffold for production of chemical derivatives.
                                                                                                                                                                                                                                          ö
                                                                                                                                                                                              100.0%; Score 74; DB 2; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Universal T-cell epitope peptide SEQ ID NO:8.
                                                                                                                                                                                                                                        0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                AAW35506 standard; peptide; 15 AA.
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                                                                                                                                                                                                                  Best Local Similarity
Matches 15, Conserv
                                                                                                                                                       Seguence 15 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9738011-A1.
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22-APR-1998
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                                                                                                                                                                                              Query Match
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derived from or indicative of pregnancy or of a disease, such as an infectious, autoimmune or cancerous disease. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vaccine for protecting mammal against infection by malaria caused by Plasmodium species - comprises a first nucleic acid encoding a first polypeptide capable of eliciting an immune reaction against an antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                           Liver stage, Plasmodium; Navy Yoelii Liver Stage 3 antibody; NYLS3; hepatic and erythrocytic stage protein; PyHEP17; vaccine; malaria parasite; teanus toxin; P2; helper T-cell epitope.
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                                                                                                                                                                                                                                                                                                                                                                                             Universal helper T-cell epitope P2 derived from tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 15;
                                                                                                       100.0%; Score 74; DB 2; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                         0; Indels
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100.0%; Score 74; DB 2; I
Best Local Similarity 100.0%; Pred. No. 9.4e-07;
Matches 15; Conservative 0; Mismatches 0;
                                                                                                                   100.0%; Pred. ...
                                                                                                                                                                                                                                                                                            AAW71321 standard; peptide; 15 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94US-00319704.
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                                                                                                                                                                          1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                          15; Conservative
                                                                                                                                                                                                        QYIKANSKFIGITEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the PyHEP17 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
Clostridium tetani.
                                                                                                     Query Match
Best Local Similarity
                                                                        Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 15 AA;
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AAW67033;

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The invention relates to the manufacture of a synthetic chimeric peptide comprising a non-typable Haemophilus influenzae fimbrin peptide fused via a linker peptide to a T-cell epitope peptide. The chimeric peptide is used in immunogenic compositions which induce an immune response against non-typable Haemophilus influenzae. This sequence represents an example of a T-cell epitope peptide used to generate the chimeric peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Covalently reactive antigen analog, CRAA, catalytic antibody, electrophilic reaction centre, phosphonate, boronate, vaccine, transition state analog, TSA, isostere, gpl20, HIV-1, T-helper, tetanus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic chimeric fimbrin peptide - useful for vaccination against non-
                                                                                                                          Chimeric; non-typable Haemophilus influenzae; fimbrin; T-cell epitope;
                                                                                  T-cell epitope peptide #4 for chimeric fimbrin/T-cell epitope peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 74; DB 2; 1 100.0%; Pred. No. 9.4e-07;
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                                                                                                                                                  immunogenic composition; immune response.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY04051 standard; peptide; 15 AA.
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              typable Haemophilus influenzae.
                                                                                                                                                                                                                                                                                                                       95US-00460502.
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                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bakaletz LO;
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                                                                                                                                                                                                                                                                                                                                                                                                           (OHIS ) UNIV OHIO STATE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            toxoid; B-T-epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kaumaya PTP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9948925-A1
                                          02-MAR-1999
                                                                                                                                                                                                                                                                                                                       02-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                 02-JUN-1995;
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                                                                                                                                                                                                                                    US5843464-A.
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                                                                                                                                                                                            Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a new carbohydrate peptide conjugate, which comprises a carrier with a dendrimeric poly-lysine enabling multiple epitopes to be covalently attached to it. Also claimed are: (1) an antibody purified from biological fluid or cells of organisms caminody purified from biological fluid or cells of organisms convenients administered with the carbohydrate peptide conjugate, and (2) a diagnosis of the carbohydrate peptide conjugate. The peptide conjugate, antibody and diagnosis kit are used to provide pharmaceutical compositions and carbohydrate peptide conjugate. The peptide conjugate, antibody and diagnosis kit are used to provide pharmaceutical compositions and capinat unmours. These can be used to support an immune response against viral infections caused by hepatitis virus, HIV or cytomegalo virus. They can be used to enhance immune responses, especially B- and T-CC carbohydrate peptide conjugate stimulates the antibody and T-cell carbohydrate peptide conjugate stimulates the antibody and T-cell capponse without stimulating undesired immune response. The composition can cappable of increasing the survival of tumour bearing humans and animals. The present sequence corresponds to residues 830-844 of tetanus town. The synthetic peptide corresponds to this sequence may be used to an map tope in a carbohydrate peptide conjugate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Carbohydrate peptide conjugate used as vaccine - comprises carrier with dendrimeric poly-lysine enabling multiple epitopes to be covalently
                                                                                                                                                                                                                                                                                     carbohydrate peptide conjugate;
tumour.
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                                                                                                                                                                                                                                                         Tetanus toxin fragment (residues 830-844)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Leclerc C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 13; 55pp; English.
                                                                                                                                                                                                                                                                                                 Tetanus toxin; vaccine; antibody; dendrimeric poly-lysine; epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW67578 standard; peptide; 15 AA.
                                                                                                                        AAW67033 standard; peptide; 15 AA
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                    1 OYIKANSKFIGITEL 15
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Les 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (INSP ) INST PASTEUR
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                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani.
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(UYNE-) UNIV NEBRASKA

AAW67578;

AAW67578 RESULT 7

Query Match

Matches

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Length 15; 0; Indels

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Example 7; Col 27; 57pp; English.
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                                                                                                                                                                                                                                                                                                                                                      AAY92625;
                                                                                                                                                                                                                                                                                                        RESULT 10
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                                                                                                                         The patent discloses new covalently reactive antigen analogs (CRAA) of formula X1-Y-B-X2, in which X1 and X2 represent peptide sequences of an epitope of a disease-associated protein, Y is a positively charged amino acid residue, preferably Lys or Arg, and B is an electrophilic reaction centre, preferably a phosphonate or boronate moiety. Depending on the identity of the epitope, the CRAA may be used to stimulate production of catalytic antibodies specific for predetermined antigens associated with particular medical disorders. They may also be used to permanently inactivate endogenously produced catalytic antibodies produced in certain autority associated with catalytic appearance of specifically exemplified CRAAs is one based on residues 421-436 of a B-cell epitope of gpl20 (see AAY04046) which may be used to counter HYV-1 infections. When used as an immunogen, preferably this CRAA is conjugated at its N-terminal to a T-helper epitope from tetanus toxodd. The present sequence represents the T-helper epitope and corresponds to residues 830-844 of the toxoid
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                                                         New covalently reactive antigen analogs used for treating e.g. autoimmune diseases, lymphoproliferative disorders, cancers, microbial infections,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Multispecific single chain antibody; antibody H22; tumour cell; therapy; antibody-dependent cellular cytotoxicity; ADCC; HER 2/neu; infection; epidermal growth factor receptor; breast cancer; ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Specific killing of tumour cells - using a multi-specific molecule comprising an anti-Fc receptor antibody and a portion which binds to a target cell.
                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 74; DB 2; Length 15; 100.0%; Pred. No. 9.4e-07;
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                                                                                ischemic and reperfusion injury or septic shock
                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                      Disclosure; Page 86; 158pp; English
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            Smith L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW73220 standard; protein; 15
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                                                                                                                                                                                                                                                                                                                                                                                                   1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                             Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tetanus toxoid epitope.
            Gololobov G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-023374/02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (MEDA-) MEDAREX INC
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                                                                                                                                                                                                                                                                                                                               Sequence 15 AA;
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            Paul S,
                                                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
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This sequence represents a tetanus toxoid epitope and is recognised by the multispecific single chain antibody designated H22. The antibody can be used in the method of the invention for inducing antibody-dependent cellular cytotoxicity (ADCC) against a tumour cell which is characterised by overexpression of HER 2/neu or epidermal growth factor receptor (EGRR), comprises contacting the tumour cell with a multispecific protein molecule (preferably a single chain antibody) comprising: (a) an anti-FC receptor antibody or an antigen binding fragment; (b) a portion which binds to HER 2/neu; and (c) a portion which binds to HER 2/neu; and (c) a portion which binds to EGRR. The method can be used for treating cancers especially breast cancer or ovarian cancer. The multispecific antibody can also be administered prophylactically to vaccinate a subject against infection by a target cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (i.e. self-proteins), for example, human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The claims detail a method for inducing immune responses against weakly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Foreign epitope, P2; prostate specific membrane antigen, PSM, Her2; Heregulin 2; Fibroblast growth factor Bb; FSFBb; vaccination; cytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 74; DB 2; I
100.0%; Pred. No. 9.4e-07;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY92625 standard; protein; 15 AA.
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98US-0105011P
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Best Local Similarity 100...
Conservative
Torner 15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 15 AA;
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20-OCT-1998;
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falciparum in biological samples

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The present sequence is the tetanus toxoid T-cell epitope P589, derived from Clostridium tetani. It is used in the construction of recombinant protein CDC/NIIMALVAC-1, which is a multivalent, multistage malarial vaccine. The recombinant protein comprises, melittin signal peptide, (His) 6 tag, T-cell epitope from tetanus toxoid and 21 antiganic epitopes from circumsporozoite protein (CSP), sporozoite surface protein-2 (SSP-2), liver stage antigen-1 (LSA-1), merozoite surface protein-1 (MSP-1), MSP-2, apical membrane antigen-1 (AMA-1), erythrocyte binding antigen-175 (BBA-175), rhoptry associated protein-1 (RAP-1) and gamete specific antigen, Pfg27. These epitopes were obtained at different stages of the life cycle of P. falciparum. CDC/NIIMALVAC-1 vaccine has antiparasitic activity and can used for treatment and prevention of malarial infections. Anti-CDC/NIIMALVAC-1 antibodies can be used for detecting P.
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; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and human/merzine FGPBb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope (e.g. P2 and/or P30) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel recombinant protein as vaccine for treating malarial infection comprises antigenic peptides obtained from different stages of plasmodium falciparum life cycle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T-cell epitope; tetanus toxoid; antigenic epitope; treatment; circumsporozoite protein; CSP; sporozoite surface protein-2; SSP-2; liver stage antigen-1; LSA-1; merozoite surface protein-1; MSP-1; apical membrane antigen-1; AMA-1; erythrocyte binding antigen-175; EBA-175; thoptry associated protein-1; RAP-1; gamete specific antigen; Pfg27; antiparasitic; prevention; anti-CDC/NIIMALVAC-1 antibody.
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Recombinant protein; CDC/NIIMALVAC-1; multivalent; malaria; vaccine;
                                                                                                                                                                                                                                                 ;
                                                                                                                                                                                                         Length 15;
                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clostridium tetani tetanus toxoid T-cell epitope, P589.
                                                                                                                                                                                                         100.0%; Score 74; DB 3; I 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                             Mismatches
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(USSH ) US DEPT HEALTH & HUMAN SERVICES.
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                                                                                                                                                                                                                                                                                                                                                                                                                               AAY70300 standard; peptide; 15
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                                                                                                                                                                                                                                                                                       1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                 15; Conservative
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                                                                                                                                                                                                     Query Match
Best Local Similarity
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                                                                                                                                                                 Sequence 15 AA;
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The present sequence represents the tetanus toxoid P2 epitope. It is used to create a fusion protein with murine osteoprotegerin ligand (OPGL). Osteoprotegerin ligand (OPGL).

Costeoprotegerin is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II transmembrane or protein. The murine and human OPGL polypeptides are 87% homologous. OPGL is a potent osteoclast differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also an activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL activity in an animal. The method comprises using at least one OPGL polypeptide or subsequence, and/or at least one OPGL analogue to induce in immune response in the animal. The method one opGL polypeptide are nimmune response in the animal. The method of use of their subsequence are immune response in the animal. The method of use of their subsequence is an immune response in the animal. The method of use of their subsequence is an immune response in the animal. The method of use of their subsequence is an immune response in the animal of method in the animal of the subsequence is an immune response in the animal. The method of use of their subsequence is an immune response in the animal of the subsequence is an immune response in the animal of the subsequence is an immune response in the animal of the subsequence is an immune response in the animal of the subsequence is an immune response in the animal of the subsequence is an immune response in the animal of the subsequence is an other sesorption and of the subsequence is an of the subsequence is an of the subsequence in the animal of the subsequence is an of the subsequence in the animal of the subsequence is an of the subsequence is an of the subsequence is an of the subsequence is an of the subsequence is an of the subsequence is an 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                an vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Osteoprotegerin ligand, OPGL; osteoprotegerin; osteoclastogenesis; tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption; tetanus toxoid P2 epitope.
                                                                                                                                                                             Gaps
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                                                                                                                         100.0%; Score 74; DB 3; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amino acid sequence of the tetanus toxoid P2 epitope.
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98US-0102896P.
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                                                                                                                                                                                                                               1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                Conservative
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                                                                                                                         Query Match
Best Local Similarity
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                                                                            Sequence 15 AA;
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100.0%; Score 74; DB 3; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels

1 QYIKANSKFIGITEL 15

Query Match Best Local Similarity 100.0 Matches 15; Conservative

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OYIKANSKFIGITEL
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AAY82637 standard; peptide; 15 AA RESULT 13 AAY82637 ID AAYE

AAY82637;

(first entry) 07-AUG-2000

Tetanus toxoid T cell epitope peptide SEQ ID NO:13.

T cell epitope; B cell epitope; allergy; allergen; antigenic; antiallergic; antiasthmatic; antiinflammatory; dermatological; immunosuppressive; vaccine; rhinitis; sinusitis; bronchial asthma; atopic dermatitis; acute urticaria; chronic urticaria; agastro-intestinal syndrome; food allergen; oro-pharyngeal syndrome; anaphylactic reaction; drug hypersensitivity; allergic reaction.

Clostridium tetani, Synthetic.

WO200006694-A2.

10-FEB-2000

99WO-BE000092 20-JUL-1999; 98EP-00870167 30-JUL-1998;

(UNIO) UCB

Saint-Remy J, Jacquemin M;

WPI; 2000-422470/36.

compound for prevention and treatment of allergies comprises at least allergen antigenic determinant recognized by a B cell and at least antigenic determinant which does not trigger T cell activation. New

Example 6; Page 30; 50pp; English

The present invention describes a compound (I) for the prevention and/or treatment of allergy. The compound comprises at least one allergen antigent determinant (i) recognised by a B cell or an antibody secreted by a B cell of a non-atopic individual and at least one antigenic determinant (ii) different from the allergen that triggers T cell activation. (I) has antiallergic, antiasthmatic, antinflammatory.

Compared and immunosuppressive activities, and can be used in a vaccine. (I) may be used in a pharmaceutical or cosmetic medicanent to treat and/or prevent allergies or a disease of allergic origin, capecially hypersensitivities. These include rhinitis, sinusitis, bronchial asthma, atopic dermatitis, some forms of acute and chronic urticaria, gastro-intestinal syndromes associated with the ingestion of conticaria, gastro-intestinal syndrome, anaphylactic reactions associated with drug hypersensitivities and/or a mixture of these. The use of (I) in the treatment of allergic conditions avoids the need for drug therapies alleviate symptoms, but do not influence their causes, however (I) actually combats the cause of an allergic reaction. The presents sequence represents a peptide, which is used in an example from the contraction. the present invention

Sequence 15 AA;

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Gaps
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100.0%; Score 74; DB 3; Length 15; ilarity 100.0%; Pred. No. 9.4e-07; Conservative 0; Mismatches 0; Indels
  Query Match
Best Local Similarity
Matches 15; Conserv
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1 QYIKANSKFIGITEL 15

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AAY44763

AAY44763 standard; peptide; 15 AA.

AAY44763;

Tetanus toxoid protein derived T-cell activating epitope P2. 04-MAY-2000 (first entry)

Surface layer protein; S-layer secretion signal; antibiotic; vaccine; tecombinant fusion protein cleavage; enzyme; protein polymer; foodstuff; antibacterial enzyme; surface glycoprotein; T-cell activating epitope; P2; tetanus toxoid; IPNV; Infectious pancreatic necrosis virus.

Clostridium tetani.

WO200004170-A1

27-JAN-2000

99WO-CA000637. 14-JUL-1999; (UYBR-) UNIV BRITISH COLUMBIA.

Smit J;

WPI; 2000-182434/16.

Cleavage of Caulobacter produced recombinant fusion proteins useful for producing vaccine peptides.

Example 2; Page 16; 33pp; English.

The patent discloses a method for cleaving a recombinant fusion protein which is produced by Caulobacter and consists of Caulobacter surface layer (S-layer) protein (containing the C-terminal secretion signal) and a target protein heterologous to Caulobacter. The cleavage of target protein heterologous to Caulobacter. The cleavage of target protein heterologous to carried out under mild acid conditions so that cleavage occurs at aspartate-proline dipeptide site without solubilising the protein. The cleavage is accomplished while the fusion protein is in an insoluble aggregate form which facilitates purification of the protein. The method is useful for producing pure profilms including recombinant human and animal therapeutic antibiotic and vaccine peptides, enzymes, protein polymers, and antibacterial enzymes for foodstuffs. The present sequence is a T-cell activating epicope P2 derived from tetanus toxoid protein. This sequence was fused to a DNA encoding a fragment of Infectious pancreatic necrosis virus surface glycoprotein which is a vaccine candidate. This chimeric protein was in turn fused to DNA encoding C. cregoentus S-layer secretion signal (corresponds to the C-terminal portion of the S-layer protein from amino acid 690 onwards and contains native Asp-Pro site) for construction of a recombinant fusion construct which is expressed in Caulobacter and then recombinant fusion construct which is expressed : cleaved to recover the vaccine candidate protein

Sequence 15 AA;

ô 100.0%; Score 74; DB 3; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels 100.0%; ---15; Conservative Local Similarity Query Match Matches

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1 OYIKANSKFIGITEL 15 QYIKANSKFIGITEL 15

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RESULT 15 AAB45511

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1 QYIKANSKFIGITEL 15

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The invention relates to a method for in vivo down-regulation of amyloid protein such as beta amyloid (Abeta) in an animal, including human. The method comprising presenting to the animal's immune system an intended comprising presenting to the animal's immune system an immunogenically effective amount of at least one amyloidogenic protein or its subsequence, and its analogue is useful for the preparation of an immunogenic composition comprising an adjuvant for down-regulating amyloid deposite. They are also useful in the treatment, prophylaxis or amelioration of Alzheimer's disease or other diseases characterised by amyloid deposite. They are also useful in the treatment of systemic amyloidosis, maturity onset disease or other diseases tharacterised by amyloid deposite. They are also useful in the treatment of systemic amyloidosis, maturity onset disease. Parkinson's disease, Huntington's disease, fronto-temporal compentia, amyotrophic lateral sclerosis (ALS), Pick's disease and prion-related transmissable spongiform encephalopathies. They are also useful for inducing production of antibodies against an amyloidogenic polypeptide. The present sequence is Clostridium tetani P2 epitope
                                                                                                                                                                                                                                                                                                                                                     In vivo down-regulation of amyloid protein for the treatment of Alzheimer's, comprises presenting an amyloidogenic polypeptide or its subsequence and/or at least one analogue of the amyloidogenic polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomypathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru, haemodialysis-asssociated beta-2-microglobulin deposition; carrier protein; universal T-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 4; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tetanus toxoid TT830-844 T-cell epitope, SEQ ID NO:7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 3; Page 117; 120pp; English.
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                                                                                                                                                                                                                                          Nielsen KG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB49071 standard; peptide; 15
                                                                              19-FEB-2001; 2001WO-DK000113.
                                                                                                                         21-FEB-2000; 2000DK-0000265.
01-MAR-2000; 2000US-0186295P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                 the immune system.
                                                                                                                                                                                                                                          Jensen MR,
                                                                                                                                                                                                                                                                                       WPI; 2001-589796/66
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                                                                                                                                                                                                                                                                                                                 N-PSDB; AAD18755.
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                                                                                                                     21-FEB-2000;
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                                   30-AUG-2001.
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                                                                                                                                                                                                                                          Birk P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amyloid protein; neuroprotective; nootropic; immunostimulant; vaccine;
                                                                                                                                                                                       Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia; vaccine, allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alzheimer's disease; anticonvulsant; gene therapy; Pick's disease; antidiabetic; systemic amyloidosis; maturity onset diabetes; ALS; amyotrophic lateral sclerosis; Parkinson's disease; encephalopathy; Huntington's disease; fronto-temporal dementia; P2 epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 137; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Z
       AAB45511 standard; protein; 15 AA
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                                                                                                                                               Tetanus P2 epitope SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                  19-APR-2000; 2000WO-DK000205.
                                                                                                                                                                                                                                                                                                                                                                                                                                                99DK-00000552
99US-0132811P
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                                                                                               26-FEB-2001 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nelminthic infections
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                                                                                                                                                                                                                                                               Clostridium tetani
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                                                                                                                                                                                                                                                                                                                                                     02-NOV-2000
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AAE11763;

RESULT 16 AAE11763

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Query Match Matches

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Gaps ; 0 human immunodeficiency virus.

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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a prognosis of disorders characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by isler amyloid protein peptide (IAPP, amylin) fibrils; reactive systemic amyloid obsis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by Affibrils derived from serum amyloid A protein (ApoSS)); systemic semile amyloidosis and familial amyloid cardiomyopathy characterised by fibrils derived from transthyretin (TTR); transmissible spongiform encephalopathies (e.g. Creutzfeld-Jakob disease, Kuru) characterised by result of long term haemodialysis treatment. The present sequence consponent in a composition of the confidence of an epitope derived from an amyloid plaque component in a composition of
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                                                                                                                                                                                                                                                                     Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 43; 140pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAM99515 standard; peptide; 15 AA.
                                          01-JUN-2000; 2000WO-US015239.
                                                                                        99US-0137010P
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Best Local Similarity 100.0
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                                                                                                                                  (NEUR-) NEURALAB LID
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                                                                                        01-JUN-1999;
07-DEC-2000
                                                                                                                                                                                Schenk DB;
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The present invention describes a pharmaceutical compound (1) that
contains an N-terminal glutamic acid (Glu) or glutamine (Gln) residue in
the form of an addition salt with a strong, physiologically acceptable
acid (II). Also described are: (a) a pharmaceutical composition
acid (II). Also described are: (a) a pharmaceutical composition
containing at least one (I); (b) a vaccine containing at least one (I)
containing at least one (I); (b) a vaccine containing at least one (I)
composition in vitro diagnosis of diseases associated with the presence of
(Ia); (d) a kit for method (c) that includes a (Ia); and (e) a process
cc for preparing (I). (I) has immunomodulator, endocrine, antiallergic,
contoprotectant, virucidal, bactericidal, antiparastic, fungicidal and
cytostatic activities. (I) are useful, in human or veterinary medicine,
contoprotectant, virucidal, bactericidal, antiparastic, fungicidal and
cytostatic activities. (I) are useful, in human or veterinary medicine,
contoprotectant, virucidal, bactericidal, parterinary medicine,
contoprotectant, virucidal, bactering immune disorders, e.g.
immune deficiency, autoimmune states, hypersensitivity, allergy, graft
crejection, infection, hormonal disorders and central nervous system
contoprotectant or prevention of: (I) viral, bacterial, parasitic or fungal
contoprotectant, virus infections between MHC and (I), e.g. melanoma and human
contoprotectant, or in pharmaceutical compounds from the present invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stabilized pharmaceutical containing N-terminal glutamic acid or glutamine, useful e.g. in anti-melanoma vaccines, is an addition salt with strong acid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goetsch L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Klinguer-Hamour C, Corvaia N, Beck A,
                                                                                                                                                                                                                                                                                                                                                                                                  (FABR ) FABRE MEDICAMENT SA PIERRE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 9; Page 136; 149pp; French.
                                                                                                                                                                                                                                           22-MAR-2001; 2001WO-FR000872
                                                                                                                                                                                                                                                                                                                       23-MAR-2000; 2000FR-00003711.
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Les 15; Conservative
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Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clostridium tetani
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                                                                               WO200170772-A2.
                                                                                                                                                               27-SEP-2001.
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The invention relates to a bispecific molecule (I) comprising specific binding sites for an Fcalpha receptor and an epidermal growth factor (EGF) receptor. It also provides bispecific molecule (II) comprising a human antibody, preferably a single chain antibody, specific for an Fcalpha receptor, linked to EGF, a bispecific molecule (III) comprising specific binding sites for an Fcalpha receptor and a HER2 receptor; (3) a multispecific molecule (IV) comprising specific binding sites for Fcalpha receptor, HER2 receptor and EGF receptor; (4) a multispecific molecule (V) comprising a human antibody specific for an Fcalpha receptor, and EGF. (I)-(V) can be used for
                                                                                                                                                  The present invention relates to compositions for stimulating the immune system and for treating malignancies associated with overexpression of the HER-2 protein. The compositions comprise immunogenic groups of the HER-2 proteins. The present sequence is one such peptide used in the compositions of the present invention. The compositions of the present invention. The compositions can be used for treating cancer, e.g. breast, ovarian, lung, prostate and colon cancers
                  Compositions comprising polypeptides and polynucleotides for stimulating the immune system and for treating malignancies associated with overexpression of the HER-2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fcalpha receptor; epidermal growth factor; EGF; HER2 receptor; tumour; immune thrombooytopenia purpura; systemic lupus erythematoeus; vaccine; cytostatic; antiviral; protozoacide; antifungal; immunosuppressive; antiinflammatory; dermatological; hemostatic; tetanus toxoid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repositic molecule comprising specific binding sites for an FC-alpha receptor and an epidermal growth factor, used to induce effector cell killing of tumor cells.
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                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 4; Length 15; 100.0%; Pred. No. 9.4e-07; rive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tetanus Toxoid universal Th epitope TT830.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB61956 standard; peptide; 15 AA.
                                                                                                           Claim 4; Page 38; 51pp; English.
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10-MAR-2000; 2000US-00523279
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-123318/13.
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                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                 Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200109186-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB61956;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                   This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Foreceptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease
                                                                                                                                                                                                                                                                                                            Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific antibody.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 4; Length 15; 100.0%; Pred. No. 9.4e-07; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                        Yednock T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Triozzi PL;
                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 28; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB68636 standard; peptide; 15 AA.
                                                                                                                                                                                                                        Bard F, Vasquez NJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ovarian; lung; prostate; colon.
                                                                                        26-MAY-2000; 2000WO-US014810
                                                                                                                                99US-00322289
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 100.
nes 15; Conservative
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                                                                                                                                                                            (NEUR-) NEURALAB LTD
                                                                                                                                                                                                                                                                  WPI; 2001-032104/04.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200108636-A2
WO200072880-A2
                                                                                                                                  28-MAY-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          38-FEB-2001.
                                                                                                                                                                                                                        Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB68636;
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Matches
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δ 원 Sequence 15 AA;

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inducing effector cell killing of tumour cells. The molecules can be used to treat or prevent viral, protozoal, or fungal infections, or autoimmune diseases such as immune thrombocytopenia purpura and systemic lupus erythematosus. The present sequence represents a wild-type tetanus toxoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tetanus toxin, T-cell epitope, growth differentiation factor 8, GDF-8, myostatin, down-regulation, vaccine, muscle, meat, cachexia, cardiant.
                                                                                                                                                                                                     Gaps
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                                                                                                                                                           100.0%; Score 74; DB 4; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                  0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                 AAB20143 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tetanus toxin T-cell epitope P2.
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                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                              Local Similarity 100.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clostridium tetani.
                                                                                                                      Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200105820-A2.
                                                                              epitope TT830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JUL-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                      AAB20143;
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Matches
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                                                                                                                                                                                                                                                                                                                              HER 2/neu; epidermal growth factor receptor; EGFR; multispecific protein; For seceptor; FGR; tumor cell; breast; cancer; sarcoma; carcinoma; HIV; pathogenic; Toxoplasma gondii; candidasis; systemic lupus; cytostatic; immune thrombocytopenia purpura; immunosuppressive; antiviral;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inducing killing of tumor cells which expresses HER 2/neu or epidermal growth factor receptor (EGFR) by contacting the cell with multispecific proteins comprising an anti-Fc receptor, -Her 2/neu or -EGFR antibody, useful for treating cancer.
                                    Gaps
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100.0%; Score 74; DB 4; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Somasundaram C;
                                                                                                                                                                                                                                                                                                                                                                                                    antifungal; antiprotozoal; TT830; tetanus toxin.
                                    Mismatches
                                                                                                                                                                                                                                                                                               Wild-type TT830 (tetanus toxin) epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Graziano R,
                                                                                                                                                                                            AAB85451 standard; peptide; 15 AA.
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96US-00661052
                                                                    1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                             (first entry)
                                  15; Conservative
                                                                                            QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goldstein J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-475189/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MEDA-) MEDAREX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani.
              Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-NOV-1998;
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                                                                                                                                                                                                                                                             25-SEP-2001
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                                                                                                                                                                                                                          AAB85451;
 Query Match
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                                  Matches
                                                                                                                                                         RESULT 23
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(first entry)

12-AUG-2002

AAU97872;

1 QYIKANSKFIGITEL 15

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New recombinant multivalent protein comprising antigenic determinants derived from more than one stage in a life cycle of Plasmodium vivax, useful as a vaccine for treating, preventing and reducing malarial infection.
                                                                                          Multivalent protein; immune response; Plasmodium vivax; parasite; protozoacide; vaccine; malaria; recombinant; ViVac1; ViVac2.
                                                                                                                                                                                                                    (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                           Example 1; Page 25; 59pp; English.
                  AAB85701 standard; peptide; 15 AA
                                                                         Amino acid sequence of P2 epitope
                                                                                                                                                                               29-JAN-2001; 2001WO-US002937.
                                                                                                                                                                                                  31-JAN-2000; 2000US-0179213P.
                                                      29-OCT-2001 (first entry)
                                                                                                                                                                                                                                       Lal AA, Xiao L, Zhou Z;
                                                                                                                                                                                                                                                         WPI; 2001-514557/56.
                                                                                                                       Plasmodium vivax.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 15 AA;
                                                                                                                                          WO200155181-A2.
                                                                                                                                                             02-AUG-2001
                                     AAB85701;
RESULT 24
          AAB85701
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The invention relates to recombinant multivalent proteins (I) that stimulate an immune response to Plasmodium vivax. (I) comprises antigenic determinants, fragments or conservative substitutions, derived from more than one stage in a life cycle of a Plasmodium vivax parasite. (I) is useful as a vaccine for stimulating an immune response, specifically a protective immune response that confers increased resistance to infection by Plasmodium parasites, such as P. vivax. (I) is especially useful in the treatment, prevention and reduction of malarial infection, as the treatment, prevention and reduction of malarial infection, as the treatment, prevention and reduction of malarial infection, as in a biological sample, and for conferring immunity against multiple stages of the malarial parasite. The antibodies produced are useful for the detection or measurement of antigenic epitopes derived from one or more stages in a life cycle of a parasite, particularly P. vivax. The vaccine comprising the recombinant proteins, is cost-effective, health-promoting intervention for controlling, preventing or treating the recombinant of malarial a component of the multivalent and multistage proteins Vivaclp and Vivac2p
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Gaps ; 0 'Match 100.0%; Score 74; DB 4; Length 15; Local Similarity 100.0%; Pred. No. 9.4e-07; es 15; Conservative 0; Mismatches 0; Indels Query Match Matches

ABG31774 standard; peptide; 15 AA.

ABG31774

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(first entry)

03-DEC-2002

2522525X

T helper cell epitope #1.

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1 QYIKANSKFIGITEL 15 OYIKANSKFIGITEL 15

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AAU97872 standard; peptide; 15 AA.
RESULT 25
AAU97872
ID AAU97
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The invention describes a method of protecting a poikilothermic fish against infection by the bacterial pathogen Fisciricketeisia Salmonis comprising administering either intraperitoneally, by immersion or orally, an immunogenic amount of principal antigen, the OspA (outer surface lipoprotein), its variants, non-lipidated form or antigenic peptides derived or synthesized with or without an adjuvant. The new method is used to provide an outer surface lipoprotein (OspA) of bacterial strain Pisciricketisa salmonis as a vaccine to induce immunity in fin-fish against Rickettsial septicaemia and other related Rickettisial diseases caused by either a virus, bacteria or parasite. This is the amino acid sequence of a Clostridium tetanis toxin P2 (tt P2) T cell epitope that can be fused to the Escherichia coli codon optimised OspA creating a promiscuous T cell epitope for use in creating the vaccine described in the invention Gaps Inducing immunity in fin fish to Rickettsial septicaemia, comprises administration of an outer surface lipoprotein (OspA) of a bacterial Outer surface lipoprotein; OspA; antibacterial; immunosupressive; vaccine; poikilothermic fish; fin-fish; Rickettsial septicaemia; Rickettisial disease; tetanus toxin P2; tt P2; T cell epitope. ö 100.0%; Score 74; DB 5; Length 15; 100.0%; Pred. No. 9.4e-07; 0; Indels Mismatches Burian J, Kuzyk MA; Tetanus toxin P2 (tt P2) T cell epitope. Disclosure; Fig 8; 55pp; English. .. 0 19-MAR-2001; 2001CA-02339327. 15-SEP-2000; 2000US-00677374. 1 QYIKANSKFIGITEL 15 l Similarity 100. 15; Conservative OYIKANSKFIGITEL Kay WW, strain, as a vaccine. WPI; 2002-455221/49. Clostridium tetani. THORNTON J (KAYW/) KAY W W. (BURI/) BURIAN J. (KUZY/) KUZYK M A. N-PSDB; ABK52412 Sequence 15 AA; Thornton JC, CA2339327-A1 15-MAR-2002. Query Match Local (THOR/) Matches RESULT 26 ઠ 셤

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to an immunogen comprising at least one first antigenic determinant that includes at least one B-cell epitope and/or at least one cytotoxic Tlymphocyte (CTL) epitope, and at least one second antigenic determinant that includes a T helper cell epitope (TH epitope), where each of the first and second antigenic determinants are coupled to an activated polyhydroxypolymer carrier. The invention also relates to an immunogenic composition for raising an immune response against an antigen in a mammal, including a human. The immunogen or immunogenic composition contained in a virtual lymph node (VLN) device is useful for immunising an animal, including a human, against an antigen of choice, where the antigen shares at least one first antigenic determinant with the immunogen. This sequence represents a T helper cell epitope used in synthesis of an immunogen of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel immunogen useful for immunizing an animal, has an activated polyhydroxypolymer backbone to which is attached an antigenic determinant including a B cell epitope and another determinant including a T-helper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Covalently reactive transition state antigen analogue; CRTSA; epitope; antigen; electrophilic covalently reactive centre; catalytic antibody; antibody; autoimmune disease; autoimmune thyroiditis; asthma; systemic lupus erythematosus; rheumatoid arthritis; Reiter's syndrome; mixed connective disease; Sjogren's syndrome; vasculitis; bird shot retinopathy; lymphoproliferative disorder; myeloma; leukaemia; lymphoma; macroglobulinaemia; vaccine; immunisation; infection; dermatological; septic shock; systemic inflammatory disease; acute respiratory distress syndrome; neoplastic disease; HIV, AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
Immunogen, B-cell epitope, cytotoxic T lymphocyte, CTL; TH epitope,
T helper cell epitope, virtual lymph node device.
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100.0%; Pred. No. 9.4e-07;
tive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 1; Page 51; 52pp; English.
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                                                                                                                                                                                                               19-FEB-2001; 2001WO-DK000113.
20-FEB-2001; 2001US-00785215.
20-AUG-2001; 2001DK-00001231.
                                                                                                                                                                            19-FEB-2002; 2002WO-DK000112.
                                                                                                                                                                                                                                                                          22-OCT-2001; 2001US-0337543P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                          Koefoed P;
                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-706932/76.
                                                                                                                                                                                                                                                                                                                   (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 15; Conserv
                                                         Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15 AA;
                                                                                                WO200266056-A2.
                                                                                                                                   29-AUG-2002
                                                                                                                                                                                                                                                                                                                                                        Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABG72721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 27
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The invention discloses a covalently reactive transition state antigen analogue (CRTSA), comprising a peptide sequence of an epitope of a target protein antigen (R 1), an electrophilic covalently reactive centre bearing a partial or full negative charge (E) and an electron withdrawing or electron donating substituent (R 2), which can optionally further comprises a flanking sequence. The CRTSA is useful for treating a disease state in a patient by irreversibly inhibiting the action of a catalytic antibody, which involves administering the CRTSA, which comprises an epitope recognised and irreversibly bound by the catalytic autibody. Preferably CRTSA is useful for treating an autoimmune thyroiditis, systemic lupus erythematosus, asthma, cantibody. Preferably CRTSA is useful for treating an autoimmune disease, such as autoimmune thyroiditis, systemic lupus erythematosus, asthma, inhopyoliferative disorder, such as myelomas, leukaemias, lymphomas, macroglobulinaemia etc. (RTSA is also useful for stimulating production corresponded to a patient against e.g. a microbial infection and for selecting catalytic antibodies on the surface of phage and B cells. This technology has applications in fields of veterinary medicine, industrial and clinical research and dermatological. The catalytic antibodies acute respiratory distress syndrome, neoplastic disease, human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome. CC Gradalytic action against the target antipen which results in its which provides superior protection against infection due to the presence of catalytic action against the target antigen which results in its epitope which can be placed on the N-terminal side of the B epitope (HIV-1) application to a large carrier protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
human immunodeficiency virus; acquired immunodeficiency syndrome; gp120;
                                                                                                                                                                                                                                                                                                                                                                                      Novel covalently reactive transition state antigen analog useful for stimulating production of catalytic antibodies, and actively immunizing patient against particular pathogen to generate protective immunity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 6; I
100.0%; Pred. No. 9.4e-07;
iive 0; Mismatches 0;
                     immunogenic; immunosuppressive; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 20; 87pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABP72694 standard; peptide; 15 AA.
                                                                                                                                                                                  01-APR-2002; 2002WO-US010116.
                                                                                                                                                                                                                           31-MAR-2001; 2001US-0280624P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                 (TEXA ) UNIV TEXAS SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                          Nishiyama Y;
                                                                                                                                                                                                                                                                                                                                                WPI; 2003-040645/03
                                                         Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15 AA;
                                                                                                 WO200279223-A2
                                                                                                                                          10-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
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                                                                                                                                                                                                                                                                                                          Paul S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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ID ABP7
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AC ABP7
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The invention relates to a synthetic chimeric fimbrin peptide. The peptide is useful for treating a non-typable Haemophilus influenzae (NTH1) infection and otitis media. The synthetic peptides do not require tedious purification techniques. The present sequence represents the amino acid sequence of a Clostridium tetani T-cell epitope #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease;
tumour necrosis factor alpha; gene therapy; arthritis; epitope;
                                                                                                                                                                                                                                                                               Synthetic chimeric fimbrin peptide, useful for treating Haemophilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ch 100.0%; Score 74; DB 6; Length 15; I Similarity 100.0%; Pred. No. 9.4e-07; 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bratt T, Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tetanus toxoid epitope (P2) peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAO30454 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                    Claim 6; Col 4; 16pp; English.
                                                                                            98US-00148711.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-NOV-2002; 2002WO-DK000764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-NOV-2001; 2001DK-00001702.
                                                                                                                            95US-00460502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kaumaya PTP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                   (OHIS ) UNIV OHIO STATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                  influenzae infections
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NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-449558/42.
                                                                                                                                                                                                                                            WPI; 2003-615247/58.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAL61290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tetanus toxoid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified.
               US6436405-B1
                                                                                                                                                                                                       Bakaletz LO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-SEP-2003
                                                                                            04-SEP-1998;
                                                                                                                              02-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22-MAY-2003.
                                                       20-AUG-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAO30454;
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(KLYS/) K
(NIEL/) N
(BRAT/) F
(VOLD/) V
(MOUR/) M
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence is the protein sequence of tetanus toxoid T-cell epitope P2. The invention provides methods for compositions for combatting diseases characterised by deposition of amyloid, such as Alzheimer's disease. Immunisation is preferably effected by administration of analogues of autologous amyloid precursor protein (APP) or beta amyloid (Abeta), the analogues being capable of inducing antibody production against the autologues mayloidogenic polypeptides. Especially preferred as an immunogen is autologous Abeta which has been modified by introduction of one or a few foreign, immunodenmant and promiscuous T-cell epitopes, such as tetanus toxoid P2 epitope. Genetic immunisation against APP or Abeta and vaccination using live vaccines are also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel analog of amyloid precursor protein or beta amyloid for treating Alzheimer's disease, has amyloid precursor protein/beta amyloid incorporating B-cell epitope of amyloid protein and foreign T-helper
                                                                     Tetanus toxoid; epitope; amyloid precursor protein; APP; beta amyloid; vaccine; genetic immunisation; nootropic; neuroprotective; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                               Degan FD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fimbrin; non-typable Haemophilus influenzae; NTHi infection;
otitis media; epitope; immunogenic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 6; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                               Nielsen KG, Koefoed P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 120; 122pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADA25169 standard; peptide; 15 AA.
                                  Tetanus toxoid T cell epitope P2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                           20-AUG-2002; 2002WO-DK000547.
                                                                                                                                                                                                                                                                                            20-AUG-2001; 2001DK-00001231.
22-OCT-2001; 2001US-0337543P.
16-APR-2002; 2002DK-00000558.
16-APR-2002; 2002US-0373027P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C. tetani T-cell epitope #3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-NOV-2003 (first entry)
11-JUN-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                               Jensen MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-312718/30.
N-PSDB; ABZ81992.
                                                                                                                                                                                                                                                                                                                                                                                          (PHAR-) PHARMEXA AS
                                                                                                                                              Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sest Local Similarity
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                                                                                                                                                                                  WO2003015812-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                               Rasmussen PB,
                                                                                                                                                                                                                     27-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADA25169;
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epitope.

Query Match

Matches

ઠે 셤 RESULT 29 ADA25169

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Gaps

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Mouritsen S;

Sequence 15 AA;

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Tetanus toxoid P2 epitope sequence.
                                                                                                                               WPI; 2003-587260/55.
                                 Sequence 15 AA;
                                                                          20-NOV-2003
                                                                                                     24-JUL-2003.
                                                                                                                                           polypeptide
                                                                                                                          Klysner S,
                                                                     ABR82482;
                                      Query Match
                                         Best Loca
Matches
                                                            RESULT 31
                                                              ABR82482
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New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
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Example 8; Page 106; 196pp; English

The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (ILE) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a tetanus toxoid epitope peptide. This sequence is used to illustrate the method of the invention

100.0%; Score 74; DB 6; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels 1 OYIKANSKFIGITEL 15 15; Conservative Local Similarity

ABR82482 standard; peptide; 15 AA.

(first entry)

CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; tetanus toxoid; p2; p30; antigen.

Clostridium tetani.

WO2003059379-A2.

17-JAN-2003; 2003WO-DK000031.

17-JAN-2002; 2002DK-00000082.

(PHAR-) PHARMEXA AS.

Voldborg B;

Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the

Disclosure; Page 139; 140pp; English.

The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least 1 modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a tetanus toxoid (TT) P2 epitope that can be introduced into a CEA polypeptide sequence

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                       Gaps
                      ö
  Length 15;
                     Indels
Score 74; DB 7;
Pred. No. 9.4e-07;
; Mismatches 0;
                      .
ch 100.0%;
1 Similarity 100.0%;
15; Conservative 0
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                                                     OYIKANSKFIGITEL
                                         1 OYIKANSKFIGITEL
 Query Match
Best Local Similarity
Matches 15; Conserv
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RESULT 32 ADC09976

ADC09976 standard; peptide; 15 AA.

ADC09976;

(first entry) 18-DEC-2003

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Gaps ö

universal T-cell epitope. Tetanus toxoid TT830-844,

BCG; T-cell; epitope; gastrointestinal; antiulcer.

Clostridium tetani.

WO2003072040-A2.

04-SEP-2003.

25-FEB-2003; 2003WO-US005421

25-FBB-2002; 2002US-0360134P. 23-APR-2002; 2002US-0374501P.

(ELAN-) ELAN PHARM INC.

Yednock TA; Taylor J,

WPI; 2003-712654/67.

ğ Preventing and/or reducing pathological inflammation by administration on a agent inhibiting alpha-4 integrin or its dimer, useful in treating multiple sclerosis, Crohn's disease, ulcerative colitis or inflammatory bowel disease

Disclosure; Page 17; 89pp; English.

The present sequence is that of a universal T-cell epitope comprising amino acids 830-844 of tetanus toxoid. Universal T-cell epitopes such as this can be used as carriers of peptide agents of the invention that bind alpha-4 integrin or a dimer comprising an alpha-4 integrin subunit.

Linkage to a carrier will improve the immune response to a peptide that may be too small to be immunogenic on its own. A method of chronically reducing a patient's pathological inflammation involves administration of an agent that specifically binds to an alpha-4 integrin or a dimer. Comprising alpha-4 integrin. The agent is administered chronically for at least 6 months, preferably at least 12 months. The administration of maintains alpha-4 integrin receptor saturation to chronically suppress pathological inflammation in the patient. The pathological inflammation is caused by inflammation in the patient. The pathological inflammation is crohn's disease, ulcerative collitis or inflammatory bowel disease, or is caused by multiple sclerosis (all claimed).

Sequence 15 AA;

Gaps ö ch 100.0%; Score 74; DB 7; Length 15; Similarity 100.0%; Pred. No. 9.4e-07; 15; Conservative 0; Mismatches 0; Indels Query Match Best Local Similarity Matches 15; Conserv

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1 QYIKANSKFIGITEL 15

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RESULT 3

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The present invention describes a method for reducing pain or increasing the threshold for nociception in an individual comprising administering an agent capable of inducing an active immune response that targets the individual's autologous tummour necrosis factor alpha (TMFalpha). The agent has analgesic activity, and can be used in a vaccine against autologous TMFalpha. The method is useful in reducing pain or increasing the threshold for nociception in an individual. The method is especially intended for reducing neuropathic pain. The present sequence represents a tetanus toxoid P2 epitope, which is given in the exemplification of the
                                                                                                                                                                                                                                                                                                                                  Reducing pain or increasing the threshold for nociception in an individual comprises administering an agent capable of inducing an active immune response that targets the individual's autologous tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 74; DB 7; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immune response; immunoglobulin; Ig; T helper epitope.
                                                                                                                                                                                                                                                          Rasmussen PB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 2; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Phillips B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Universal T helper epitope, SEQ ID 26.
                                                                                                                                                                                                                                                          Pedersen LH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADL90086 standard; protein; 15 AA.
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                                                                                                                  11-MAR-2003; 2003WO-DK000147,
                                                                                                                                                       11-MAR-2002; 2002DK-00000368.
11-MAR-2002; 2002US-0363128P.
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14-MAR-2003; 2003WO-US007995.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15; Conservative
                                                                                                                                                                                                                                                          'n
                                                                                                                                                                                                                                                        Pedersen HR, Ebert
                                                                                                                                                                                                                                                                                               WPI; 2003-748335/70.
                                                                                                                                                                                                                   (PHAR-) PHARMEXA AS.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ASTR-) ASTRAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wang L,
                                    WO2003075951-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2004027049-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                               Eactor alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-APR-2004.
                                                                             18-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADL90086;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3ot A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADL90086
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a synthetic chimaeric fimbrin peptide LB1 or LB2 comprises a first peptide unit derived from H. influenzae fimbrin, a second peptide unit containing a real epitope and a third linker peptide which connects the first peptide to the second. The chimaeric peptide is useful for inducing an immune response in animals against non-typable Haemophilus influenzae (NTHi) and for preventing or reducing adherence of NTHi to host cells thereby preventing or reducing the severity of otitis media. The present sequence is a clostridium tetani T cell epitope for use in the chimaeric peptides of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel synthetic chimeric fimbrin peptide LB1 or LB2 comprising a first peptide unit, T cell epitope as second peptide unit and third linker peptide unit, useful for preventing or reducing severity of otitis media.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pain reduction; nociceptive; nociceptor; immune response; tumour necrosis factor alpha; TNPalpha; analgesic; vaccine; pain; neuropathic pain; tetanus toxoid; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 7; Length 15; 100.0%; Pred. No. 9.4e-07; cive 0; Mismatches 0; Indels
                                                                                                                                                                                                               Fimbrin, T cell epitope; vaccine; otitis media; auditory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tetanus toxoid P2 epitope SEQ ID NO:2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 10; SEQ ID NO 7; 15pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Æ
                                                     ADC89658 standard; peptide; 15 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADC81609 standard; peptide; 15
                                                                                                                                                                                                                                                                                                                                                                                           19-AUG-2002; 2002US-00223711.
                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-00148711
                                                                                                                                                                      C. tetani T cell epitope #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ||||||||||||||||||||||||||||||||||QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kaumaya PTP;
                                                                                                                                 01-JAN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JAN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BAKA/) BAKALETZ L O.
(KAUM/) KAUMAYA P T P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2003-810881/76.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                      Clostridium tetani
                                                                                                                                                                                                                                 antiinflammatory.
                                                                                                                                                                                                                                                                                                             US2003113344-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bakaletz LO,
                                                                                                                                                                                                                                                                                                                                                                                                                                  04-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                    19-JUN-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADC81609;
                                                                                            ADC89658;
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RESULT 34 ADC81609

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Gaps

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compositions comprising ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; a nucleic acid encoding a phrelin analogue of the invention y vectors and host cells comprising this nucleic acid; a compositions of the invention. The method of the invention is useful for creating, preventing or ameliorating obseits by downregulating ghrelin to treating, preventing or ameliorating obseits by downregulating ghrelin to such an extent that the total amount of body fat is significantly decreased. The method may also be used for urgequlating ghrelin for the treatment, prevention or amelioration of anorexia or cachexia. The method creatment, prevention or amelioration of anorexia or cachexia. The method created cancers and for treating wound or burns, in adjuvant therapy for in vitro fertilisation, and for treating ghrelin and ghrelin receptor crelated cancers. The present sequence represents the tetanus toxin P2 epitope, a promiscuous T-cell epitope, which may be used in ghrelin companience.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 37
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                                                  Generating an immune response to an antigen, useful for generating desired T cell responses comprises administering an immunoglobulin having one peptide epitope of the antigen attached to the immunoglobulin.
                                                                                                                                                                           The present invention relates to a method for generating an immune response to an antigen in a patient. The method comprises administering to the patient an immunoglobulin (Ig) or its portion where the Ig has at least one peptide epitope of the antigen attached to the Ig or its portion and administering the immunoglobulin or its portion in conjunction with a RNA segment. The present sequence is an antigen sequence, used to illustrate the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ghrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin (or sub-sequence thereof) or a ghrelin analogue comprising a ghrelin B-cell epitope and non-ghrelin chemical moieties to the immune system, thereby inducing the production of antibodies against the
                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; tetanus toxin; P2 epitope;
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                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 2; SEQ ID NO 7; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tetanus toxin P2 epitope, SEQ ID NO:7.
                                                                                                                                    Disclosure; Fig 1J; 154pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADM06894 standard; protein; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-SEP-2002; 2002DK-00001345.
12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-SEP-2003; 2003WO-DK000592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (PHAR-) PHARMEXA AS.
             WPI; 2004-295415/27
                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
es 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2004024183-A1
                                                                                                                                                                                                                                                                                                                                                   Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-MAR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADM06894;
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                  antiparkinsonian, antibody therapy, Lewy body, alpha-synuclein; aggregation, brain, immunogenic response, beta-amyloid; Parkinson's disease.
                                                                  ö
                             100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                   Tetanus toxoid amino acids 830-844 for fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; SEQ ID NO 16; 78pp; English.
                                                                                                                                                                                                                 ADP02883 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-2002; 2002US-0423012P
                                                                                                 1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                    (first entry)
                                                                  15; Conservative
                                                                                                                      1 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ELAN-) ELAN PHARM INC. (REGC) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani.
                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004041067-A2.
Sequence 15 AA;
                                                                                                                                                                                                                                                                                    12-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             beta-amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-MAY-2004.
                                                                                                                                                                                                                                                    ADP02883;
                               Query Match
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Gaps

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0; Indels

Length 15;

100.0%; Score 74; DB 8; I 100.0%; Pred. No. 9.4e-07; Mismatches

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Conservative 1 QYIKANSKFIGITEL

1 Similarity 15; Conserv

Query Match Local Best Loc Matches QYIKANSKFIGITEL

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against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alpha-synuclein aggregation. This sequence corresponds to the tetanus toxoid peptide corresponding to amino acid 830-844 used in the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                                                                                   Gaps
involves administering agent that induces immunogenic response
                                                                                                                                                                                                                                                                                                                                                                                                                    antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                         Fusion protein #10 for treating neurodegenerative disorder.
                                                                                                                                                       Length 15;
                                                                                                                                                                                Indels
                                                                                                                                                   100.0%; Score 74; DB 8; I
100.0%; Pred. No. 9.4e-07;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                        ADP02898 standard; peptide; 15 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-OCT-2003; 2003WO-US034527.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-2002; 2002US-0423012P
                                                                                                                                                                                                           1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                     1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                12-AUG-2004 (first entry)
                                                                                                                                                   Query Match 100.
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004041067-A2.
                                                                                                                          Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-MAY-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Schenk DB,
                                                                                               invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                     ADP02898;
                                                                                                                                                                                                                                                                              RESULT 38
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antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;

aggregation; brain; Parkinson's disease.

Clostridium tetani. WO2004041067-A2. 31-OCT-2003; 2003WO-US034527. 01-NOV-2002; 2002US-0423012P.

21-MAY-2004.

(ELAN-) ELAN PHARM INC. (REGC) UNIV CALIFORNIA. Schenk DB, Masliah E;

WPI; 2004-411388/38.

beta-amyloid

Tetanus toxoid amino acids 830-844.

(first entry)

12-AUG-2004

ADP02876;

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ADP02876 standard; peptide; 15 AA.

RESULT 39

ADP02876

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The invention relates to a method of preventing (MI) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to amino acids 830-844 of the tetanus toxoid protein used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO 9; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 15 AA;
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Matches
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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease which involves administering agent that induces immunogenic response against alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alpha-synuclein aggregation. This sequence corresponds to a fusion peptide used

the method of the invention

Sequence 15 AA;

Disclosure; SEQ ID NO 31; 78pp; English.

Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or

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1 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OYIKANSKFIGITEL
                                                                                                                                                                                                       Boas U;
                                                                                                                                                                                                                           WPI; 2004-419632/39.
                                                                    Clostridium tetani
                                                                                         WO2004041310-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-SEP-2004
                                                                                                                                                                                                       Heegaard P,
                                                                                                               21-MAY-2004
                                                                                                                                                                                                                                                                                     dendrimer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADP48561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADP48561
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alpha-synuclein aggregation. This sequence corresponds to the tetanus toxoid peptide corresponding to amino acid 830-844 used in the method of the
                                                                                                                                                                                                                                                                                                                                                  Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                            antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tetanus toxoid peptide #1 for carbohydrate dendrimer conjugate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                     Tetanus toxoid amino acids 830-844 for fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 74; DB 8; L
Pred. No. 9.4e-07;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; SEQ ID NO 18; 78pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    $
                     ADP02885 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADO24820 standard; peptide; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                          31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                               01-NOV-2002; 2002US-0423012P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QYIKANSKFIGITEL 15
                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                    (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                        Masliah E;
                                                                                                                                   Parkinson's disease.
                                                                                                                                                                                                                                                                                                                             WPI; 2004-411388/38.
                                                                                                                                                       Clostridium tetani.
                                                                                                                                                                             WO2004041067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                     beta-amyloid
                                                                 12-AUG-2004
                                                                                                                                                                                                     21-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-AUG-2004
                                                                                                                                                                                                                                                                                                        Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nvention.
                                          ADP02885;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADO24820;
RESULT 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 41
           ADP02885
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The invention relates to a method of synthesizing chemoselectively a carbohydrate dendrimer (CD) conjugate having a specific structure containing a functional dendrimer, a residue of a carbohydrate, and a residue of an immunomodulating substance. (CD) is useful in the cresidue of an immunomodulating substance. (CD) is useful in the cresidue of an immunomodulating substance. (CD) is useful in the cresidue of an immunomodulating substance. (CD) is useful in the credit of bacterial adhesion, inhibition of toxins and other such bacterial toxins cylycosphingolipid-specific VT2 toxins and other such bacterial toxins with binding activities toward cell-surface carbohydrates of the host, or inhibition of carbohydrate-mediated virus entry into host cells, in carbohydrate-mediated virus entry into host cells, in chigatory in assays for the detection of antibodies against E, and in high-throughput screening. (CD) are useful for treating and/or preventing bacterial diseases such as infection with HIV, hepatitis or influenza, fungal diseases and certain types of cancer such as carcinomas or melanomas. The cuthon anables fast and efficient synthesis of dendrimer conjugates contains toxoid peptide sequence used in the method of the invention.
         anti-HIV; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthesizing chemoselectively carbohydrate dendrimer conjugate havin carbohydrate residue and immunomodulating substance, by identifying chemoselective and carbohydrate residue, and binding residues to
antibacterial; virucide, fungicide, hepatotropic, anti-HIV, cytostat
vaccine, bacterial adhesion inhibitor; toxin action inhibitor;
carbohydrate dendrimer; immunomodulating substance; HIV; hepatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chimeric binding protein; immunogenic; B-cell epitope; scaffold protein structure; major histocompatibility complex; MHC; Class II; cytostatic; vaccine; cancer; promiscuous; tetanus toxoid;
                                                                                                                                       influenza; fungal disease; cancer; carcinoma; melanoma; poliovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Promiscuous T-H tetanus toxoid epitope peptide, P2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (DAFO-) DANMARKS FODEVARE OG VETERINAERFORSKNING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 20; 81pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADP48561 standard; peptide; 15 AA.
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100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-NOV-2002; 2002DK-00001724.
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Query Match
Best Local Similarity lou...
Best Local Similarity lou...
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The invention relates to a method of in vitro antigen specific activation of antibody producing cells by culturing a population of isolated, non-adherent mononuclear immune cells, which population comprises T helper cells or its functional equivalent, where the antibody producing cells and a functionally insignificant number of lysosome-containing cells, for a time and under conditions sufficient to induce differentiation of the antibody producing cells. The method is useful for in vitro antigen specific activation of antibody producing cells. This sequence corresponds to an epitope from the tetanus toxoid protein and used in the method of the invention.
                                                                                                                                                                                                                                                                                                   cells
mononuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T-cell stimulatory peptide; immunogen; non-dendritic; carrier; tumour; scaffold; inhibition; metastasis; wound healing; solid phase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Non-dendritic peptide carrier linked to a solid phase - useful as a
                                                                                                                                                                                                                                                                                                In vitro antigen specific activation of antibody producing cells comprises culturing a population of isolated, non-adherent mononu immune cells for a time and under conditions sufficient to induce differentiation of the cell.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T-cell stimulatory peptide SEQ ID NO:51.
                                                                                                                                                                                                                                                                                                                                                                                                             Claim 23; SEQ ID NO 2; 88pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW35445 standard; peptide; 16 AA.
                                                                                                                                                                 (APOL-) APOLLO LIFE SCI PTY LTD
                                                                                                                        10-DEC-2002; 2002US-0432395P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97WO-DK000146.
                                                                            10-DEC-2003; 2003WO-AU001655.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 100.
18 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1997-512645/47.
                                                                                                                                                                                                                                                         WPI; 2004-487905/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 15 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-APR-1996;
                                  24-JUN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-MAR-2003
22-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-OCT-1997.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                             Chen J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 44
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel chimeric binding protein that is immunogenic in an animal. The chieric binding protein binds specifically to a first receptor that binds a second receptor present in an antigen of the animal, where the chimeric binding protein has: a B-cell epitope in the form of a binding site; a scaffold protein structure, autologous in the form of a binding site; and conformation of the binding site; and at least one tolerance breaking amimo acid sequence, which is heterologous in the animal and which binds to a major histocompatibility comprises: a nucleic acid fragment that encodes the chimeric binding protein; a vector carrying the nucleic acid fragment that encodes the chimeric binding protein; any exercity; a composition for inducing production of antibodies against an antigen in the autologous host comprising the chimeric binding protein, nucleic acid fragment and carrier, and down-regulating a self-antigen or a cell that displays epitopes of the self-antigen in an animal. The chimeric binding protein has cytostatic activity. The chimeric binding protein has cytostatic activity. The chimeric binding protein in preparing a vaccine against e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                               New chimeric binding protein comprising a B-cell epitope, a scaffold protein structure and a tolerance breaking amino acid sequence, useful in
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       epitope peptide for use in the vaccine of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antigen specific activation; antibody producing cell; non-adherent mononuclear immune cell; T helper cell; lysosome-containing cell; differentiation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide epitope from tetanus toxoid protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              preparing a vaccine against e.g. cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 1; 61pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADP76011 standard; peptide; 15 AA.
                                                                                                                                                                                 11-DEC-2002; 2002DK-00001893.
11-DEC-2002; 2002US-0432532P.
12-FEB-2003; 2003DK-00000198.
12-FEB-2003; 2003US-0466707P.
                                                                                                                                        11-DEC-2003; 2003WO-DK000859
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Best Local Similarity 100.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-468817/44.
                                                                                                                                                                                                                                                                                                (PHAR-) PHARMEXA AS
         Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2004053139-A1.
                                                     WO2004052930-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                            Mouritsen S;
                                                                                                 24-JUN-2004
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present invention describes a conjugate (A) comprising a
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                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 46
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                                                                      A non-dendritic peptide carrier (A) has been developed which is coupled through a linker to a solid phase, forming a complex of (A)-solid phase.

CC where (A) comprises 10.50 amino acids capable of forming a secondary structure in a benign buffer after liberation from the solid phase, and structure in a benign buffer after liberation from the solid phase, and further the (A)-solid phase complex comprises an immunogenic substance appearance of and/or an immunom mediator coupled on (A). The present sequence represents a specifically claimed T-cell stimulatory peptide from the present convention of chemical derivatives, characterised by covalently attaching complexition of chemical derivatives, characterised by covalently attaching complexition and A)-iscome complex which is used for the chemical coupling of antigenic substances in an aqueous solution by conjugation. (A) derivatised with one or more peptides having fibronectin-, laminin- or contractinely be an eughners of and metastasis, and for promotion of wound healing. Also a derivatised confident contraction of specifically-binding appearers or as a diagnostic agent from or indication of wound healing. Also a desired contractine molecules derived from or indicative of pregnancy or of a disease, such as an infection us, autocimmune or cancerous disease. (Updated on 25-MAR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .<del>.</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conjugate of hepatitis B core protein, modified to increase reactivity with hapten, used to raise antibodies against the hapten, e.g. in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human hepatitis B core protein; HBc; modified; immunodominant; nucleocapsid protein; vaccine; T cell epitope.
diagnostic agent and as a scaffold for production of chemical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 74; DB 2; Length 16; 100.0%; Pred. No. 1e-06; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani antigen tox polypeptide hapten.
                                              Claim 30; Page 199; 262pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 3; Page 38; 128pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY29705 standard; protein; 16 AA.
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les 15, Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 16 AA;
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                derivatives
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Matches
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trategically modified hepatitis B core (HEC) protein (1) attached to a hapten, where (I) includes amino acids (as) 10-140 of the wild type HBC (183 as sequence (given in AAY29674) and additionally has an insert (II) in the region corresponding to as' 8 50-100, where the insert is of 1 to about 40 as's and contains a chemically reactive as residue linked to the chapten. A vaccine containing (A), optionally in the form of particles, is used to induce a protective antibody response against the pathogen from which the hapten is derived, in humans or other animals. These pathogens which the hapten is derived, in humans or other animals. These pathogens convercemes the low reactivity of as side chains in native HBC protein, increasing the reactivity with hapten and resulting in conjugates of improved immunogenicity. Modified HBC can be derivatised in the form of particles by well-defined chemical methods, and is unlikely to cause immunological side-effects. AAX29675 to AAX29735 represent polypeptide haptens used in an example from the present invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer;
Tetanus toxoid precursor peptide; tentoxylysin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tetanus toxoid precursor peptide, tentoxylysin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU11413 standard; peptide; 16 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-MAY-2001; 2001WO-US014363.
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Matches 15; Conservative
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The invention relates to a recombinant hepadnavirus nucleocapsid protein, i.e. a chimeric hepatitis B core (HBC) protein (I), displaying one or more immunogenic epitopes at the N-terminus, HBC immunogenic loop (L) or C-terminus, or having a heterologous linker for a conjugated epitope in (L), and containing a Cys residue at, or near, the C-terminus that confers enhanced stability to the particles. A vaccine comprising (I) is useful for inducing an immune response in an inoculated animal, by inoculating a host animal with the vaccine, and maintaining that inoculated animal for a time period sufficient for that animal to develop in immune response. The immunogenic particles formed using (I) are substantially free of binding to nucleic acids, and are most stable than the particle formed from otherwise identical HBc chimer that lacks the C-terminal residue. The chimer particles are most stable on storage in aqueous compositions that are particles of similar sequence that lack any C-
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              useful inducing an immune response against GRHH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterine and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRHH antibody titres. The present sequence is Teranus toxoid precursor peptide, tentoxylysin, a promiscuous helper T-cell peptide epitope used in the immunogen of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel recombinant hepadnavirus nucleocapsid protein, termed as chimeric hepatitis B core protein, displays immunogenic epitopes at N-terminus, HBc immunogenic loop with linker for conjugated epitope and C-terminus.
  immunomimic peptide epitope or its analogue. The synthetic immunogen is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Immunogenic, hepadnavirus nucleocapsid protein, hepatitis B core, HBc, vaccine, B cell epitope, T cell epitope; Immunostimulant.
                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                        Score 74; DB 5; Length 16;
Pred. No. 1e-06;
; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clostridium tetani tox T cell epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU93865 standard; peptide; 16 AA.
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15-AUG-2001; 2001US-00930915.
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                                                                                                                                                                                                                                                                                                                          1 OYIKANSKFIGITEL 15
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nes 15; Conservative
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                                                                                                                                                                                                  Sequence 16 AA;
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Matches
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           exhibiting the nucleic acid binding of those native particles, and excellent. B cell and T cell immunogenicities. The chimer particles are typically prepared in higher yield than similar particles that are free of a C-terminal Cys. The particles are often far more immunogenic than the similar conjugates that lack a C-terminal Cys. Immunogenicities of particles assembled from the chimer molecules are enhanced as compared to similar particles assembled from chimer molecules are enhanced to terminal Cys. AAU93802-AAU93997 represent immunogenic HBc particles amino acid sequences and related sequences of the invention
The chimer molecule exhibits the self-assembly not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Treating chronic hepatitis B infection by administering a T cellstimulating vaccine containing immunogenic particles having recombinant carboxy-terminal truncated hepatitis B core (HBC) chimeric protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hepatotropic; virucide; antiinflammatory; chronic hepatitis; vaccine; recombinant hepatitis B core chimeric protein; HBc chimeric protein; hepatitis B infection; T-cel stimulator; B-cell epitope.
                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric hepatitis B virus related B-cell epitope segid 175.
                                                                                                                                                                                               100.0%; Score 74; DB 5; Length 16
100.0%; Pred. No. 1e-06;
ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                     ADE10941 standard; peptide; 16 AA.
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21-FEB-2002; 2002US-00082014.
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                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                               15; Conservative
terminal Cys residues.
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                                                                                                                                                                                             Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (PAGE/) PAGE M.
(FRIE/) FRIEDE M.
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                                                                                                                                                                  Sequence 16 AA;
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Matches
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The invention describes a method of treating chronic hepatitis comprising administering to a patient a T cell-stimulating amount of a vaccine comprising immunogenic particles dissolved or dispersed in a diluent, where the immunogenic particles consists of recombinant hepatitis B core (HBC) chimeric protein molecules, and maintaining the patient to induce T colls activated against HBC. The methods and compositions of the present invention are useful for treating chromic hepatitis B infection. This is the amino acid sequence of a chimeric hepatitis B infection. This is the amino acid sequence of a chimeric hepatitis B virus related B-cell epitope useful for expression within the HBV chimer at the N-terminus, within the immunoigenic loop and/or at the C-terminus.

Sequence 16 AA;

2 QYIKANSKFIGITEL 16

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RESULT

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The invention relates to novel peptides (I) of 5-40 amino acids (aa)
derived from a cytokine in which at least one aa has at least one of its
atoms spaced a distance (d), evaluated from structural data, less than 5
angstrom from an atom of the corresponding cytokine receptor is new.
Excluded are peptides from between the 2nd and 3rd Cys of RANTES and from
residues 122-140 of interferon-alpha. (I) and their derivatives, also
peptides from the 123-140 region of interferon-alpha, are useful for
treatment and prevention of diseases associated with high levels of
cytokines, e.g. multiple solerosis, rheumatoid polyarthritis, psoriasis,
autoimmune diabetes, lupus, allergy, asthma, cancer and AIDS. Since (I)
correspond to regions very close to the receptor, production of
autoidamune diabetes, lupus allergy, asthma, cancer and AIDS. Since (I)
correspond to regions very close to the receptor, production of
antibodies that facilitate or potentiate cytokines is limited, and the
antibodies that maune response is improved by restricting the number of
antiganic determinants targeted. This sequence corresponds to the tetanus
to corresponds to the immune targeted. This sequence corresponds to the tetanus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cytokine-derived peptide, useful as vaccine for treating conditions sed by excess cytokine, contains residues closely associated with a
                                                                                                                                                                                                                                                                                                                                                                                             immunosuppressive; neuroprotective; antirheumatic; antiarthritic; antibsoriatic; antidabetic; dermatological; antiinflammatory; antialergic; antiasthmatic; cytostatic; anti-HIV; vaccine; cytokine; multiple sclerosis; rheumatoid polyarthritis; psoriasis; autoimmune diabetes; lupus; allergy; asthma; cancer; AIDS;
                                                        Gaps
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        100.0%; Score 74; DB 7; Length 16; 100.0%; Pred. No. 1e-06;
                                                    0; Indels
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                                                                                                                                                                                                                                  ADK41128 standard; peptide; 16 AA.
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                                                                                                                                                                                                                                                                                                                                                         Tetanus toxin T-cell epitope.
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                                                                                                                               1 OYIKANSKFIGITEL 15
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Query Match
Best Local Similarity 100.
Marches 15; Conservative
                                                                                            1 OYIKANSKFIGITEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immune response.
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                                                                                                                                                                                                                                                       immunogenic; avian hepatitis B virus; nucleocapsid; self assembled particle; immunogen; inoculum; vaccine; immunostimulant; antibacterial; virucidal; T-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention relates to novel recombinant immunogenic chimeric avian hepatitis B core (AHBc) nucleocapsid proteins. Specifically, it refers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New recombinant chimer avian hepatitis B core protein molecule, uan immunogen for inducing a B cell or T cell response to produce antibodies, or as a vaccine against pathogens.
                                                                                                                                                                                                   C_tetani T-cell peptide epitope expressed by HBc chimer Seg 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; SEQ ID NO 165; 278pp; English.
                        ADM39833 standard; peptide; 16 AA.
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                                                                                                                                            (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-679948/64.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (APOV-) APOVIA INC.
                                                                                                                                                                                                                                                                                                                                                                           Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003072722-A2.
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                                                                                                                                            03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-SEP-2003.
                                                                                     ADM39833;
ADM3983
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Gaps ; 0

100.0%; Score 74; DB 7; Length 16; 100.0%; Pred. No. 1e-06; Live 0; Mismatches 0; Indels

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Gaps

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100.0%; Score 74; DB 7; Length 16; 100.0%; Pred. No. 1e-06; ive 0; Mismatches 0; Indels

Query Match
Best Local Similarity 100.0
Matches 15; Conservative

1 QYIKANSKFIGITEL 15

Conservative

Query Match Best Local Similarity Matches 15; Conserv

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The present invention relates to antigenic peptides derived from tumour suppressor protein Wild induce HLA-A4 restricted cryotoxic T-lymphocytes. The peptides can be used in the preparation of cancer vaccine for treatment and prevention of cancer, including leukaemia, multiple myeloma, and cancer of the stomach, colon, breast, liver, ovary, skin, pancreas, prostate and womb. The present sequence is a polypeptide used in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antigenic peptides derived from WT1 which induce HLA-A24 restricted cytotoxic T-lymphocytes for production of cancer vaccine and treatment
Human, mouse, HLA-A24-restricted cancer antigen, antigen; cancer,
tumour suppressor protein, cytostatic, WT1; vaccine.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8; Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTL induction; cancer vaccine; stomach cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 74; DB 8; 100.0%; Pred. No. 1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amino acid sequence of synthetic peptide #2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 98; Opp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                         Takasu H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prostate cancer; ovarian cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CHUS ) CHUGAI SEIYAKU KK.
(SUMU ) SUMITOMO PHARM CO LTD.
(SUGI/) SUGIYAMA H.
                                                                                                                                                                                                                                                                                       CHUGAI SEIYAKU KK.
SUMITOMO PHARM CO LTD.
                                                                                                                                                                                     12-JUN-2003; 2003WO-JP007463.
                                                                                                                                                                                                                            12-JUN-2002; 2002JP-00171518.
20-SEP-2002; 2002JP-00275572.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-SEP-2003; 2003WO-JP011974.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-SEP-2002; 2002JP-00275264.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and prevention of cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                       (CHUS ) CHUGAI SEIYAKU
                                                                                                                                                                                                                                                                                                                                                                         Gotoh M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-090846/09
                                                                                                                                                                                                                                                                                                                                (SUGI/) SUGIYAMA H.
                                                                                                    WO2003106682-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004026897-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 16 AA;
                                                                                                                                                                                                                                                                                                                                                                         Sugiyama H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-APR-2004.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; WT1;
                                                                                                                                            24-DEC-2003
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                                                             Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 53
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a recombinant chimer hepatitis B core (HBC) protein molecule that includes a peptide-bonded heterologous immunogenic epitope at the N-terminus in the HBC immunodeninant loop or the C-terminus of the chimer, or a heterologous linker residue for a conjugated epitope present in the loop. The invention also relates to an immunogenic particle comprising the recombinant hepatitis B core chimeric protein molecules, a vaccine comprising the immunogenic particles dissolved or dispersed in a diluent, a nucleic acid that encodes a recombinant HBC protein molecule or its variant, analogue, or complement and a method for inducing an immune response in an inculated host animal consultating a host animal with a vaccine and maintaining the incoulated animal for a period of time sufficient to enable development of an immune crapponse. The recombinant chimer hepatitis B core protein molecule is used in an immunogenic particle for preparing a vaccine useful for inducing an immune response in an inculated host animal. This sequence represents an HBC protein immunogenic B cell epitope of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Recombinant chimer hepatitis B core protein molecule useful for preparing vaccine or inoculum includes peptide-bonded heterologous immunogenic epitope at N-terminus in the hepatitis B core immunodominant loop or C-
                                                                                                                                                                                   ombinant chimer hepatitis B core protein; HBC; immunogenic epitope; immunodominant loop; immune response.
                                                                                                                                          Recombinant chimer hepatitis B core protein immunogenic epitope #134.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 8; Length 16; 100.0%; Pred. No. 1e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID NO 145; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAO24402 standard; peptide; 16 AA.
                   ADG64012 standard; peptide; 16 AA
                                                                                                                                                                                                                                                                                                                                                                         21-FEB-2002; 2002US-00082014
                                                                                                                                                                                                                                                                                                                                                                                                                 15-AUG-2001; 2001US-00930915
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                                                                                                    (first entry)
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168 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        epitope at N-terminus in terminus of the chimer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-031988/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        (BIRK/) BIRKETT A J.
                                                                                                                                                                                                                                               Clostridium tetani
                                                                                                                                                                                                                                                                                       US2003185858-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 16 AA;
                                                                                                    11-MAR-2004
                                                                                                                                                                                     Recombinant
                                                                                                                                                                                                                                                                                                                                02-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Birkett AJ;
                                                             ADG64012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAO24402;
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  ADG64012
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Clostridium tetani T cell epitope of gene tox.
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                                                         Disclosure; Page 18; 65pp; Japanese.
                                                                                                                                                                                              ADP73582 standard; peptide; 16 AA.
      Takasu H,
                                                                                                                                                                                                                                                                                                                                         Haron JA
                                                                                                                                                                                                                                                                                                     10-DEC-2003; 2003WO-US039164.
                                                                                                                                                                                                                                                                                                                 10-DEC-2002; 2002US-0432123P.
                                                                                                                                                     1 OYIKANSKFIGITEL 15
                                                                                                                                                                QYIKANSKFIGITEL 16
                                                                                                                                                                                                                     (first entry)
                                                                                                                            Query Match
Best Local Similarity 100.
      Gotoh M,
                                                                                                                                                                                                                                                                                                                                         Birkett AJ,
                WPI; 2004-295379/27.
                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-468859/44.
                                                                                                                                                                                                                                                                   Clostridium tetani.
                                                                                                                                                                                                                                                                                                                             (APOV-) APOVIA INC.
                                                                                                                                                                                                                                                                              WO2004053091-A2
                                                                                                                    Sequence 16 AA;
                                                                                                       specification.
      Sugiyama H,
                                                                                                                                                                                                                     09-SEP-2004
                                                                                                                                                                                                                                                                                          24-JUN-2004
                                                                                                                                                                                                                                                                                                                                        Lyons K,
                                                                                                                                                                                                         ADP73582;
                                               cancer.
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domains from the N-terminus that are denominated Domains I, II, III and IV. The invention also provides nucleic acids, polypeptides, host cells, vectors and transgenic animals used in the methods of the invention. The chimeric compositions of the invention have hepatotropic and virucide useful in the fields of immunology and protein engineering, in particular for using a chimeric hepatitis B virus nucleocapsid protein as an immunogen in a vaccine for Hepatitis B infections. This sequence represents a Hepatitis B virus nucleocapsid protein as an represents a Hepatitis B virus nucleocapsid (core) protein related polypeptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This invention relates to novel mutant peptides derived from SYT-SSX. Specifically, it refers to a peptide S393, which is a modified tumour antigen peptide that can be used as the active ingredient in a cancer vaccine. The present invention describes the development of mutant peptides that exhibit increased binding affinity to the HLA-A24 antigen, and as such have a favourable cytotoxic lymphocyte (CTL) induction activity. Accordingly, these peptide epitopes can be used to treat patients suffering from various tumours including synovial sarcoma, and furthermore they exhibit cytostatic activities. This peptide sequence is a helper peptide related to the S393 peptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SYT-SSX; SS393; tumour antigen peptide; cancer vaccine; cytocoxic lymphocyte induction; synovial sarcoma; tumour; cytostatic; helper peptide.
residues and contains four peptide-linked amino acid residue sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel mutant peptide of SYT-SSX origin, useful as pharmaceutical composition of cancer vaccine for inducing cytotoxic T cells, and as
                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 74; DB 8; Length 16; 100.0%; Pred. No. 1e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Helper peptide related to the SS393 peptide SeqID 8.
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Pred. No. 1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; SEQ ID NO 8; 28pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADP90539 standard; peptide; 16 AA.
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100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SATO N. SUMITOMO SEIYAKU KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                       15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diagnostic of tumor.
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Best Local Similarity
                                                                                                                                                                                                                                                                                                      Sequence 16 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JP2004180566-A.
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                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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  88888888888888
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
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                                                                                                                                                                                                                                                                          The specification describes WTI substitution peptides, in which a cysteine residue is substituted with another amino acid residue. The WTI substitution peptides have CTL induction activity. Peptides of the invention are used in cancer vaccines, which are applicable in the treatment of e.g. stomach cancer, prostate cancer and ovarian cancer. The present peptide represents a peptide that is mentioned in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New recombinant chimer hepatitis B core (HBC) protein molecules useful in the fields of immunology and protein engineering, in particular as an immunogen in a vaccine for Hepatitis B infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a novel recombinant chimeric Hepatitis B virus mucleocaspid (core) protein (HBC), up to 600 or 380 amino acid residues in length. The chimeric protein is engineered for both enhanced stability of self-assembled particles and the substantial absence of nucleic acid binding by the particles. The invention further comprises: a recombinant HBC protein chimeric molecule that has a length of 135-365 amino acid
                                                                                                                  Novel WT1 substitution peptides with cysteine replaced by specific amino acid residue and their encoded polynucleotide for cancer vaccines with CTL induction activity for treatment of e.g. stomach cancer and prostate
                          Nakatsuka M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       transgenic animal; Hepatitis B virus nucleocaspid core protein; HBc; enhanced stability; hepatotropic; virucide; immunology; protein engineering; immunogen; vaccine; Hepatitis B infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 74; DB 8; Length 16; 100.0%; Pred. No. 1e-06; ive 0; Mismatches 0; Indels
                          Kusunose N,
                       Samizo F,
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Matches

ઠ Я RESULT 56 AAR62692

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AAR82571-91 are helper T cell epitopes which can be used in the preparation of a peptide immunogen that is useful in vaccines for treating allergic reactions. In the immunogen an IGE CH4 peptide is attached C-terminally to a series of amino acids including a helper T cell epitope. The immunogen may also opt. contain a fatty acid or fatty acid derivative, an invasin domain or alpha-NH2. The immunogen produces high titres of antibodies to the effector site in human IGE heavy chain (the CH4 domain peptide) which inhibit mast cell activation and reduce allergen-induced IGE prodn. The immunogens may be used in either a radially branching multimeric form or a linearly arranged monomeric form
                                                                                                                                                           IgE; CH4; immunoglobulin; epsilon; immunogen; helper T cell; epitope; vaccine; allergy; antibody; constant heavy chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic peptide-based immunogen contg. IgB CH4 peptide and helper cell epitope - useful for eliciting antibody prodn. for allergy treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T-antigen; vaccine; antibody; T-cell; T-lymphocyte; alpha-helix;
colled-coil heterodimer; core peptide; subunit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 2; Length 17; 100.0%; Pred. No. 1.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                          retanus toxin helper T cell epitope, TT1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 3; Page 59; 87pp; English.
       AAR82573 standard; peptide; 17
                                                                                                                                                                                                                                                                                                                                                                      94US-00218461.
94US-00328912.
                                                                                                                                                                                                                                                                                                                                                                                                                             (UNBI-) UNITED BIOMEDICAL INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OYIKANSKFIGITEL 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T-cell antigen TT2 peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                    (first entry)
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Les 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1995-351297/45.
                                                                                                                                                                                                                    Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-JUN-1996
                                                                                                                                                                                                                                                         WO9526365-A1
                                                                                                                                                                                                                                                                                                                                  24-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                        28-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                         25-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9531480-A1
                                                                                    13-JUN-1996
                                                                                                                                                                                                                                                                                               05-0CT-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                 AAR82573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR88395;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wang CY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 58
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic I lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HiA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequence (i.g. Gly-Gly) can be provided between the invasin and Th domains and between the invasin and Th hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator components. The present sequence represents a tetanus toxin helper T cell epitope which can be used as Th in the immune stimulator. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
           Gaps
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                                                                                                                                                                                                                                                                                                                                                  Helper T cell epitope; universal immune stimulator; invasin; hapten;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
             ö
                                                                                                                                                                                                                                                                                                               Helper T cell epitope for use in universal immune stimulator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 74; DB 2; Length 17; 100.0%; Pred. No. 1.1e-06; ive 0; Mismatches 0; Indels
           Indels
           ;
         Mismatches
                                                                                                                                                                             AAR62692 standard; peptide; 17 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94WO-US004832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93US-00057166.
94US-00229275.
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                                               1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                      (revised)
(first entry)
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Best Local Similarity 100.
Matches 15; Conservative
           Conservative
                                                                                OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                        vaccine; tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1994-357910/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ladd AE, Wang CY,
                                                                                                                                                                                                                                                                                                                                                                                                           Clostridium tetani
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∺ ∺
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (LADD/) LADD A E (WANG/) WANG C Y (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9425060-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-APR-1994;
                                                                                                                                                                                                                                                      25-MAR-2003
10-SEP-1995
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           15;
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Gaps

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IndelB

RESULT 57 AAR82573

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This T-cell antigen TT2 peptide may be attached to a core peptide contained in one of the 2 subunits of an alpha-helical coiled-coil heterodimer. Each core peptide is comprised of terminal and internal AA repeat sequences. This peptide antigen is attached to the core peptide through covalent linkages to certain AA of the internal repeats. The 2 subunits of the heterodimer are arranged in a stable alpha-helical coiled coil configuration having a 1:1 stoichiometry, and the peptide antigen is disposed toward the outer surfaces of the configuration. The heterodimer may be used as a synthetic vaccine (optionally multivalent)
                                                                                                                                                                                            Hetero:dimeric polypeptide immunogen in coiled-coil configuration with different antigens on each sub:unit - useful in vaccines and for antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunoglobulin, IgE; membrane protein; human; epsilon chain; hepatitis B; membrane anchoring domain; helper T cell; surface antigen; core antigen; pertussis toxin; tetanus toxin; measles virus F protein; immunocherapy; Chlamydia trachomatis major outer membrane protein; immunogen; vaccine; diphtheria toxin; plasmodium falciparum; circumsporozoite; E. coli TraT; schistepoma maneoni; triose phosphate isomerase; allergenic reaction; allergic rhinitis; food allergy; anaphylaxis; virally-induced asthma; antihistamine; decongestant; beta-2 agonist; immunosuppression;
                                                                                                                                Irvin RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                Cachia PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 74; DB 2; I 100.0%; Pred. No. 1.1e-06;
                                                                                                                                Hodges RS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tetanus toxin helper T cell epitope #1.
                                                                                               (SPIS-) SPI SYNTHETIC PEPTIDES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW05599 standard; peptide; 17 AA.
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                                                                                                                                                                                                                                                           Claim 7; Page 61; 95pp; English.
                                                                                                                               Kay CM,
                                                                94US-00245507.
                                95WO-CA000293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                           to generate antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 100.
es 15; Conservative
                                                                                                                               Zhou NE,
                                                                                                                                                             WPI; 1996-010880/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 corticosteroid
                                18-MAY-1995;
                                                                18-MAY-1994;
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23-NOV-1995
                                                                                                                               Houston ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW05599;
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Best Local S
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(UNBI-) UNITED BIOMEDICAL INC

Walfield AM;

Wang CY,

94US-00328519.

25-OCT-1994;

25-OCT-1995;

02-MAY-1996

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                                                                                                                                              AAW05957-W05616 represent helper T cell epitopes used in the peptide immunogens of the invention. This sequence represents the tetanus toxin helper T cell antigen. The peptides of the invention contain one of these sequences, and a membrane-bound immunoglobulin B (19E) fragment (see used in vaccines for the immunoglobulin B (19E) fragment (see used in vaccines for the immunotherapeutic treatment of allergonic reactions, including allergot rhinitis, food allergies, anaphylaxis, or virally-induced asthma. The immunogens overcome the short effective preventing the broad immunosuppression of corticosteroids. The peptides do not have the potential side effects of restlessness or sedation associated with matihistanines), associated increased morbidity in asthmatics (as seen with beta-2 agonists) and adverse hormonal activities (observed in corticosteroid users)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New compositions containing immunogenic peptide epitopes for various HLA class II DR molecules useful for inducing helper T cell response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             immune response; chronic viral disease; cancer; autoimmune disease; rheumatoid arthritis; multiple sclerosis; myasthenia gravis; AIDS; allograft rejection; allergy; lyme disease; hepatitis; prostate cancer; glomerulonephritis; food hypersensitivity; malaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human leucocyte antigen; HLA class II; antigen epitope; pharmaceutical;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                               Peptide immunogen useful in treatment of allergy - comprises membran
bound IgE epsilon-chain peptide synthesised linearly in tandem with
helper epitope peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention relates to a new pharmaceutical composition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HLA class II binding antigen epitope peptide #463
                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 2; I
100.0%; Pred. No. 1.1e-06;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY99274 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sidney J,
                                                                                                                    English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 47; 60pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US012066.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 OYIKANSKFIGITEL 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100...
Local Si Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 QYIKANSKFIGITEL
                                                                                                                    Claim 2; Page 18; 53pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sette A, Southwood S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (EPIM-) EPIMMUNE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-097143/08
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9961916-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-DEC-1999.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 60
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Comprising a mile uses term of a peptide, our anatogue, comprising a mile uses terms and the world wide population. The class DR molecules, representative of the world wide population. The class DR molecules, representative of the world wide population. The peptide/analogue binds to an Hih class II molecule at an IC-50 of less than or equal to 1,000 nM. The pharmaceutical course the immune response towards selected determinants and could therefore be used to induce a chronic viral diseases and cancer. Examples of diseases that can be treated using the peptide containing pharmaceutical include autoimmune diseases (rheumatoid arthritis, multiple solerosis, and myasthenia gravis), allograft rejection, allergies, lyme disease, hepatitis, post-created using the peptide epitopes can be used to enhance immune gravis), allograft rejection, allergies, lyme disease, hepatitis, post-created endocarditis or glomenulonephritis and food hypersensitivities. The peptide epitopes can be used to enhance immune capenses against other immunogens administered with the peptides prostate cancer, hepatitis B, hepatitis C, AIDS, renal carcinoma, cervical cancer, hepatitis B, hepatitis C, AIDS, renal carcinoma, cervical cancer, hepatitis B, hepatitis C, AIDS, renal carcinoma, cervical carcinoma, ilymphoma, and condyloma acuminatum. The peptides may also be useful as gannostic or therapeutic agents. The peptides may also be useful as diagnostic or cancer, hepatitis will be at substantial risk of developing chronic infection. The selection of appropriate T and B cell epitopes should allow the entended ente comprising a unit dose form of a peptide, or analogue, comprising an epitopės of pathogens which are characterized by high sequence variability such as HIV, HCV and Malaria Sequence 17 AA;

Gaps ö 100.0%; Score 74; DB 3; Length 17; 100.0%; Pred. No. 1.1e-06; tive 0; Mismatches 0; Indels Conservative Local Similarity les 15; Conserv Query Match Matches

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1 OYIKANSKFIGITEL 15 1 OYIKANSKFIGITEL 15 ઠે 셤

RESULT 61

AAY58768 standard; peptide; 17 AA. AAY58768

(first entry) 25-APR-2000

AAY58768;

Unidentified peptide.

Helper T cell; Th epitope; feed additive; growth promotion; somatostatin.

Unidentified

W09966950-A1

29-DEC-1999

99WO-US013923 21-JUN-1999; 98US-00100415. 20-JUN-1998;

(UNBI-) UNITED BIOMEDICAL INC.

Wang

WPI; 2000-160560/14.

New somatostatin helper T-cell epitope conjugate for raising antisomatostatin antibodies to enhance growth rate in animal by reducing growth inhibitory activity of somatostatin.

Disclosure; Page 50-51; 59pp; English

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The present sequence is that of an unidentified peptide of the invention. The invention relates to peptide compositions (see AAYS8739-66) useful as immunogens for growth promotion in farm animals. The immunogenic peptides contain helper T cell epitopes which comprise multiple class II MHC motife and have somatostatin at either the C- or N-temrinus. They may also include an invasin domain which acts as a general immune stimulator. The helper T cell epitopes and the invasin domain elimune stimulator. response against the somatostatin self-peptide
                                                                                                                                                                                                                                                                                                                                                             Immunoglobulin E; IgE; epsilon heavy chain; antigenic; antigen; immunoglopenic; immunoglimulatory; carrier protein; helper T cell epitope; antibody; allergy; allergy disease; immunisation; anti-allergic; anti-acthmatic; asthma; anaphylaxis; dermatitis.
                                                                                                                                                          Gaps
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                                                                                                                                  DB 3; Length 17;
                                                                                                                                                        0; Indels
                                                                                                                              100.0%; Score 74; DB 3; I 100.0%; Pred. No. 1.1e-06;
                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                       Pathogen derived Th epitope SEQ ID NO:63.
                                                                                                                                                                                                                                                                  AAY80056 standard; peptide; 17 AA.
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                                                                                                                                                                                                       OYIKANSKFIGITEL 17
                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                          15; Conservative
                                                                                                                              Query Match
Best Local Similarity
                                                                                                          Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                15-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                         Unidentified
                                                                                                                                                                                                                                                                                         AAY80056;
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(UNBI-) UNITED BIOMEDICAL INC 99WO-US013959. 98US-00100287. W09967293-A1 21-JUN-1999; 20-JUN-1998; 29-DEC-1999.

Wang CY, Walfield AM;

WPI; 2000-160578/14.

New antigenic peptide from the CH3 domain of immunoglobulin E, fusions for immunization against allergy.

Claim 11; Page 79; 155pp; English.

The present invention describes immunoglobulin E (IgE)-CH3 domain antigenic peptides (I). (I) have anti-alergic, anti-anaphylactic and antigenic properties. (I) induces polyclonal antibodies specific c attaget effector site on the epsilon-heavy chain of IgE, and so c a target effector site on the epsilon-heavy chain of IgE, and so preventing triggering and activation of mast cells and basophils and commandation of IgE synthesis. Conjugates, or fusion peptides, containing (I) are used for active immunication against IgE-mediated allergies, e.g. food allergies, asthma, anaphylaxis, or flea-allergy dermatitis. Nucleic acids that encode these compounds are useful for recombinant production of corresponding peptides or in DNA vaccines. Conjugates of (I) that include a promiscuous T helper cell epitope (functional in genetically diverse subjects), in addition to a B cell carget epitope, have increased immunogenicity and may include cyclic constraints (disulfide bridge) to stabilise conformational features and maximize cross-reactivity to the natural target. They induce safe (noncamphylactogenic) antibodies. AAY79994 to AAY80084 represent amino acid sequences used in the exemplification of the present invention

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which is included in vaccines of the invention. The specification describes polyepitopic fragments of human p53, which is overexpressed in many types of cancers. The p53 polyepitopic fragments bind stably to human leukocyte antigen (HIA) type molecules. The p53 peptides induce a specific immune response. They induce cytolysis, by cytotoxic T cells (CTL), of cells that express the p53 peptides associated with appropriate HIA molecules and induce secretion of cytokines (particularly interleukin derivatives, nucleic acids encoding them and specific antibodies are used, in compositions or vaccines, to treat or prevent diseases p53-related cancers, particularly of breast, colon, lung or bladder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    present sequence represents an antigenic fragment of tetanus protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New polyepitopic fragments from the p53 protein, useful for treatment or prevention of cancer, e.g. of breast or colon.
                                                                                                                                                                                                                                                                                                                                                                            Polyepitopic peptide; p53; cancer; human leukocyte antigen; HLA; immune response; cytolysis; cytotoxic T cell; CTL; cytokine secretion; interleukin-2; IL-2; IL-4; gamma-interferon; p53-related cancer;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
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Indels
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100.0%; Pred. No. 1.1e-06;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INSERM INST NAT SANTE & RECH MEDICALE,
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Guillet JG,
                                                                                                                                                                                                                                                                                                                                  Antigenic fragment of tetanus protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Page 12; 26pp; French.
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                                                                                                                                                                                                AAB31118 standard; peptide; 17
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                                                                                   3 OYIKANSKFIGITEL 17
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                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Choppin J, Bourgault VI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.
Matches 15, Conservative
  15; Conservative
                                            1 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-064173/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BIOV-) BIOVECTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                 tetanus protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FR2794368-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-JUN-1999;
                                                                                                                                                                                                                                                                                      02-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-DEC-2000.
                                                                                                                                                                                                                                              AAB31118;
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  Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAM99516
                                                                                                                                                                              AAB3111
ID AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence represents a broadly reactive promiscuous T helper carll (Th) epitope derived from tetanus toxin. It is conjugated to antigenic peptides derived from the CDR2-like domain of the human CD4 protein. These antigenic peptides present neutralising receptor/correceptor effector sites of the CDR2-like domain. The peptides evoke effective antibody responses by having optimised site-specificity. The induced antibodies block human immune deficiency virus (HIV) binding and syncytia formation. They may also block CD4-Class II interactions with other cells, deliver signals to T cells (inhibiting normal CD4+-mediated immunoregulatory functions) or induce apoptosis of CD4 cells bimmulances engagement of T cell receptors. Conjugates and peptides containing the antigenic peptides are used for active immunisation to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            generate antibodies against CD4 surface complexes, especially to prevent binding of HIV to CD4 and thus HIV infection, but also to treat undesirable immune responses such as transplant rejection, or autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diseases (rheumatoid arthritis, systemic lupus erythematosus or psoriasis). These conjugates produce high-titre antibodies which are broadly neutralising against primary isolates from all classes of HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; CD4 protein; antigenic peptide; CDR2-like domain; apoptosis; syncytia formation; human immune deficiency virus; HIV binding; CD4-Class II interaction; immunisation; CD4 surface complex; immune response; transplant rejection; autoimmune disease; psoriasis; rheumatoid arthritis; systemic lupus erythematosus; tetanus toxin.
                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antigenic peptide from the CDR2 domain of CD4, for immunization
                                                                                                          ;
                                                            Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 3; Length 17; 100.0%; Pred. No. 1.1e-06;
                                                                                                      Indels
                                                       100.0%; Score 74; DB 3; L llarity 100.0%; Pred. No. 1.1e-06; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                          T helper cell (Th) epitope of tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       against e.g. human immune deficiency virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 11; Page 65; 106pp; English.
                                                                                                                                                                                                                                                                                                      AAY54539 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UNBI-) UNITED BIOMEDICAL INC
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                                                                                                                                                                              3 QYIKANSKFIGITEL 17
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                                                                                                                                                    1 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-160579/14.
                                                                              Local Similarity
tes 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clostridium tetani
                Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9967294-A1
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                                                            Query Match
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                                                                                                      Matches
                                                                                                                                                                                                                                                               RESULT 63
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Gaps

Beta-amyloid precursor protein: APP; chimeric peptide; B cell epitope; vaccine; T helper cell epitope.

Clostridium tetani.

WO200142306-A2

14-JUN-2001.

(MIND-) MINDSET BIOPHARMACEUTICALS USA INC

WPI; 2001-381648/40.

Chain B;

38-DEC-2000; 2000WO-US033203.

08-DEC-1999;

Amino acid sequence of T helper cell epitope of tetanus toxin.

(first entry)

22-AUG-2001

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Glutamic acid; glutamine; vaccine; major histocompatibility complex; MHC; immunomodulator; antiallergic; endocrine; neuroprotectant; virucidal; bactericidal; antiparasitic; fungicidal; cytostatic; medicine; pharmaceutical; immune disorder; immune deficiency; autoimmune; phypersensitivity; allergy; graft rejection; infection; hormonal disorder; central nervous system disease; cancer; melanoma; anti-melanoma vaccine; human immunodeficiency virus.
                                                                                                                                                                                                                                                                                                                     Stabilized pharmaceutical containing N-terminal glutamic acid or glutamine, useful e.g. in anti-melanoma vaccines, is an addition salt with strong acid.
                              Vaccine related MHC ligand peptide SEQ ID NO:619.
                                                                                                                                                                                                                                                                             Beck A,
                                                                                                                                                                                                                                                       SA PIERRE.
                                                                                                                                                                                                                                                                                                                                                                  Claim 9; Page 136; 149pp; French.
                                                                                                                                                                                                                                                                             Corvaia N,
                                                                                                                                                                                                                              23-MAR-2000; 2000FR-00003711.
                                                                                                                                                                                                           22-MAR-2001; 2001WO-FR000872
         (first entry)
                                                                                                                                                                                                                                                      (FABR ) FABRE MEDICAMENT
                                                                                                                                                                                                                                                                                                 WPI; 2001-611470/70.
                                                                                                                                                                                                                                                                           Klinguer-Hamour C,
                                                                                                                                          Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17 AA;
                                                                                                                                                               WO200170772-A2
                                                                                                                                                                                     27-SEP-2001
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Goetsch L;

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The present invention describes a pharmaceutical compound (I) that contains an N-terminal glutamic acid (Glu) or glutamine (Gln) residue in the form of an addition aalt with a strong, physiologically acceptable acid (II). Also described are: (a) a pharmaceutical composition act least one (I); (b) a vaccine containing at least one (I) where this is a major histocompatibility complex (MFC) ligand (Ia); (c) a method for in vitro diagnosis of diseases associated with the presence of (Ia); (d) a kit for method (c) that includes a (Ia); and (e) a process or for preparing (I). (I) has immunomedulator, endocrine, antialargic, neuroprotectant, virucidal, bactericidal, antiparastic, fungicidal and cytostatic activities. (I) are useful, in human or veterinary medicine, in pharmaceutical compositions (for treating immune disorders, e.g. immune deficiency, autoimmune states, hypersensitivity, allergy, graft rejection, infection, hormonal disorders and central nervous system of diseases), also, where (I) is a MHC ligand (Ia), in vaccines for treatment or prevention of: (i) viral, bacterial, parasitic or fungal infections, or (ii) of cancers. A particular application is in antimalannome vaccines. (I) are also useful for in vitro diagnosis of diseases associated with interactions between MHC and (I), e.g. melanoma and human immunodeficiency virus infection. AMM98898 to AMM98922 represent invention (II) which can be used in pharmaceutical compounds from the present invention
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02-APR-2001
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Query Match
                Matches
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                                                                                    Gaps
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                                                                   Length 17;
                                                                                   0; Indels
                                                                   100.0%; Score 74; DB 4; I 100.0%; Pred. No. 1.1e-06;
                                                                                   Mismatches
                                                                                   ;
0
                                                                                                  12
                                                                                                                1 OYIKANSKFIGITEL 15
                                                                                   Conservative
                                                                                                 1 OYIKANSKFIGITEL
                                                                          Best Local Similarity
Matches 15; Conservat
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Query Match

AAB84435 standard; peptide; 17 AA.

RESULT 66 AAB84435

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AAB84435;

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The present sequence represents a T helper cell epitope, which is used to create chimeric peptides of the invention. The chimeric peptides contain a N- or C-terminal end-specific B cell epitope from a naturally occurring internal peptide cleavage product of a precursor or mature protein, as a free N- or C-terminus, joined to a T cell epitope, with or without a spacer amino acid residue. Chimeric peptides comprising beta-amyloid precursor protein (APP) peptides slow down, reduce or prevent the accumulation of amyloid beta peptide in the extracellular space, interstitial fluid and cerebrospinal fluid of the brain, and aggregation interstitial fluid and cerebrospinal fluid of the brain, and aggregation of amyloid beta peptides or plaques. They also block the interaction of amyloid beta. The chimeric peptides are useful for neurotoxicity of amyloid beta. The chimeric peptides are useful for immunizing humans againet the free N- or C-terminus of an internal self peptide cleavage product (e.g. APP peptide) derived from a precursor protein or a mature protein. The internal peptide cleavage product is the self molecule of the mammal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel chimeric peptide containing N- or C-terminal end-specific B cell epitope from naturally occurring internal peptide cleavage product (such as beta amyloid peptide) of a precursor protein, joined to T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polyepitopic peptide; E6 protein; E7 protein; HPV; CD4 epitope; The Liper cell; human leukocyte antigen; HLA; immune response; cytolysis; cytotoxic T cell; CTL; cytokine secretion; interleukin-2; IL-2; IL-4; gamma-interferon; HPV infection; cervical neoplasia; invasive cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 74; DB 4; Length 17; 100.0%; Pred. No. 1.1e-06;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB30941 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 8; Page 43; 47pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
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Ferries

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The present sequence represents an antigenic fragment of tetanus protein, which is included in vaccines of the invention. The specification describes polyepitopic fragments from the Nef protein of human immune deficiency virus (HIV). The Nef peptides bind stably to human leukocyte antigen (HLA) type molecules. The Nef peptides induce a specific immune response. Particularly, they induce cytolysis, by cytotoxic T cells (CTL), of cells that express Nef associated with appropriate HLA molecules and induce secretion of cytokines (particularly interleukin (IL)-2 and IL-4, and gamma-interferon by these CTL. The Nef peptides, their derivatives, nucleic acids encoding them and specific antibodies are used, in compositions or vaccines, to treat or prevent diseases specifically acquired immunodeficiency winds (HIV) infection, see also useful for in vitro diagnosis of these diseases
                                                                                                                                                                               New polyepitopic fragments from Nef protein of the human immune deficiency virus, useful for treatment or pravention of acquired immune deficiency syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Letanus toxin; T cell epitope; CD8 response; Thi type immune response; Thi CD4-specific T lymphocyte; infection; cytotoxic T lymphocyte; CTL; antiretroviral therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 74; DB 4; Length 17; Best Local Similarity 100.0%; Pred. No. 1.1e-06; Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                Connan F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CNRS ) CNRS CENT NAT RECH SCI.
(INSP ) INST PASTEUR LILLE.
(INRM ) INSERM INST NAT SANTE & RECH MEDICALE.
                            (BIOV-) BIOVECTOR THERAPEUTICS SA. (INRM ) INSERM INST NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Amino acid residues 830-846 of tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note= "acetylated residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "-CONH2 attached"
                                                                                                Guillet JG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAG62904 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                             Disclosure; Page 6; 24pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99FR-00016716.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 OYIKANSKFIGITEL 15
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                                                                                                Bourgault VI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-SEP-2001 · (first entry)
                                                                                                                                          WPI; 2001-064174/08.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200149821-A2
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Modified-site
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                                                                                                Choppin J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAG62904;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence is derived from a tetanus protein, and is included in vaccines of the invention. The specification describes polyepitopic fragments from the BG and E7 proteins of human papilloma virus (HPV). The HPV peptides include CD4 epitopes recognised by T helper cells. They bind stably to human leukocyte antigen (HLA) type molecules. The HPV peptides induce a specific immune response, particularly cytolysis, caused by cytotoxic T cells (CTL). They also induce secretion of cytokines cytotoxic tells (CTL). They also induce secretion of cytokines cytotoxic antibodies are used, in compositions or vaccines, to treat or prevent diseases associated with HPV infection, e.g. cervical or vulvar intraepithelial neoplasia and invasive cancer of the cervix uteri. The antibodies are also useful for in vitro diagnosis of these diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                 New polyepitopic fragments from human papilloma virus E6 and E7 proteins, useful for treatment or prevention of e.g. cervical neoplasia and cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polyepitopic fragment; Nef protein; HIV; human leukocyte antigen; HLA; immune responses; cytolysis; cytocoxic T cell; CTL; cytokine secretion; interleukin-2; IL-2; IL-4; gamma-interferon; vaccine; HPV: tetanus; acquired immune deficiency syndrome.
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0
                                                                                                                                                                                                                                                                                                                                            Ferries E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 4; Length 17; 100.0%; Pred. No. 1.1e-06; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                          Connan F,
                                                                                                                                                                                                                                                                                           (INRM ) INSERM INST NAT SANTE & RECH MEDICALE.
                                                                                                                                                                                                                                                                                                                                          Guillet JG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Antigenic fragment of tetanus protein.
                                                                                                                                                                                                                                                                      (BIOV-) BIOVECTOR THERAPEUTICS SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Page 12; 27pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB31029 standard; peptide; 17 AA.
vulvar intraepithelial neoplasia
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                                                                                                                                                                               99FR-00012511.
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                                                                                                                                                                                                                                                                                                                                          Bourgault VI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-064175/08.
                                            Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 17 AA;
                                                                                                                                                                             07-OCT-1999;
                                                                                         FR2794371-A1
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                                                                                                                                   38-DEC-2000
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08-DEC-2000

AAB31029;

RESULT 68 AAB31029

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Gaps

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                                                                                                                                                                           The present sequence represents a peptide, comprising residues 830-846 of tetanus toxin. The peptide is a T cell epitope. The peptide induces a Thl 197pe immune response, and is used to produce a Thl CD4-epecific T lymphocyte cell line. To produce the cell lines (D4+ T cells are isolated from a donor sample, and are subjected to in vitro immunisation with T cell epitopes, in the presence of dendritic cells. The cell lines of the invention induce cytotoxic T lymphocytes (CTL), i.e. a CD8 response, against infectious agents such as viruses, bacteria and parasites. The cell lines are used to prevent or treat infections caused by viruses, bacteria and parasites, specifically human immune deficiency virus (HIV), especially in combination with highly active antirietroviral therapy, to restore the Thi response. Treatment with the composition causes a marked and rapid reduction in viremia but does not eradicate the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Solid supports for the synthesis of compounds having an alpha-oxo-aldehyde group and peptides, made by solid phase synthesis using such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Solid supports; alpha-oxoaldehyde group; glyoxylic acid derivative; vaccine; macromolecule; microtitration plate.
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                                                                                             CD4-specific T lymphocytes of Th1 type, useful in immunotherapy infections, specifically by human immunodeficiency virus.
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                                Auriault C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 4; Length 17; 100.0%; Pred. No. 1.1e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide 5 for peptides containing alpha-oxoaldehyde group.
                               Gras-Masse H, Bouzidi A, Hachulla E,
(SEDA-) SEDAC SOC ETUD & DEV ANTIGENES COMBINATO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Acylated N-terminus"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB15589 standard; peptide; 17 AA.
                                                                                                                                                  Example 3; Page 13; 18pp; French.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-094357/11.
                                                                 WPI; 2001-441868/47.
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Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 17 AA;
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Modified-site
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                                Pancre V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB15589;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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AAB15589
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                                                                     The invention relates to solid supports, functionalized for the synthesis of compounds having an alpha-oxo-aldehyde group, a process for the synthesis of such compounds. The invention also covers peptides having an alpha-oxoaldehyde group situated in a position other than a N-terminal extremity and not being linked through amide to an amine on a side chain of lysine or ornithine, prepared using a support of the invention. This sequence represents an example of a peptide used in the method of the invention. Solid phase synthesis of alpha-oxoaldehyde peptides and other organic molecules such as non-peptidic derivatives of glyoxylic acid. Such products are themselves useful in the pharmaceutical industry for synthetic vaccines, synthesis of macromolecules, and microtitration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention relates to a novel peptide immunogen comprising a helper T cell (Th) epitope, an N-terminal fragment of amyloid beta helper T cell (Th) epitope, in N-terminal fragment of amyloid beta consisting of tresidues 1-42) linked to the epitope and optionally a spacer consisting of at least an amino acid to separate the immunogenic domains. Sequences of the invention are useful for preventing or treating halteimer's disease (Ab) in a mammal, to produce antibodies to Abeta peptide that is cross-reactive to soluble Abeta peptides and brain tissue plaques formed from it. They are useful for aliciting a site-directed mutagenesis against the main functional/regulatory site of the Abeta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel peptide immunogen comprising a helper T cell epitope, an N-terminal fragment of amyloid beta peptide linked to the epitope, and optionally a spacer, useful for preventing or treating Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunogen, helper T cell, Th epitope, amyloid beta, Alzheimer's disease, Abeta, AD; brain tissue plaque; immunoneutralisation, neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                        Length 17;
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100.0%; Pred. No. 1.1e-06;
ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clostridium tetani T helper cell epitope #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE35609 standard; peptide; 17 AA.
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                                      Example 4; Fig 3; 86pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UNBI-) UNITED BIOMEDICAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAY-2001; 2001US-00865294.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Query Match
Best Local Similarity 100.vv
Best Local 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vaccine; nootropic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                              Sequence 17 AA;
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supports.
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                                                                                                                                                                                                                                                                                                            plates
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peptide and for generating antibodies, which are highly cross-reactive to the soluble Abeta peptide and the amyloid plaques formed in the brain of Alzheimer's disease patients. The sequences are useful for induction of accelerated clearance of amyloid plaques and immunoneutralisation of the soluble Abeta derived toxins in the brain to prevent and treat Alzheimer's disease. They are also useful as vaccines. The present sequence is Clostridium tetani T helper (Th) cell epitope used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Diagnosing Type-1 diabetes, by contacting patient sample comprising T-cells with proinsulin peptide and detecting the ability of peptide to stimulate T-cells by measuring ability of T-cells to proliferate or
                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          preproinsulin; type I diabetes; T-cell; proinsulin peptide; cytokine;
                                                                                                                                                                                                                                       ;
                                                                                                                                                                                                      Length 17;
                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                  100.0%; Score 74; DB 6; L
100.0%; Pred. No. 1.1e-06;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                               ADA09238 standard; peptide; 17 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       blood of type I diabetic patients
                                                                                                                              exemplification of the invention
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                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                       1 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hickey WF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tetanus toxoid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-595984/56.
                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     produce cytokines.
                                                                                                                                                               Sequence 17 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           insulitis.
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The invention relates to a novel peptide represented by formula (I) given below. The new peptide is represented by formula (I): (A) n - (Th) m - (B) o -Abeta(4-10). (C) p where each of A, B and C are an amino acid residue or sequence of amino acid residues; n, o or p = 0-20, when o is 0 then Th is directly connected to the B cell epitope Abeta(4-10) through a peptide of that tomprises a helper T cell epitope or its immune enhancing analogue that comprises a helper T cell epitope or its immune enhancing analogue or segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment; m = 0-5; Abeta(4-10) is Phe-Arg-His-Asp-Ser-Gly-Tyr cor segment in the Parain of an individual afflicted with Alzheimer's disease, disaggregating the amyloid dibrils in the brain of an individual afflicted with Alzhei
                                                                                                                                                                                                                                                                                                                                                                                                                 amyloid beta, Abeta(4-10); helper T cell epitope, neuroprotective;
nootropic; Alzheimer's disease; amyloid deposit; brain; amyloid fibril.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New immunogenic peptide Abeta(4-10), useful in preparing a composition for treating Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inhibitor of amyloid deposition and fibril formation. The present sequence represents a helper T cell epitope peptide of the invention.
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                                                                                                                                                                                                                                                                                                                                                               Human helper T cell epitope peptide SEQ ID NO:5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UTOR ) UNIV TORONTO GOVERNING COUNCIL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 2; SEQ ID NO 5; 86pp; English.
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                                                                                                                                                                                              ADM80624 standard; peptide; 17 AA.
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OYIKANSKFIGITEL 15
                                                 OYIKANSKFIGITEL 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                          (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-903280/82.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                       03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-OCT-2003.
                                                                                                                                                                                                                                                   ADM80624;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 74
ADG74074
ID ADG74
XX
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                                                                                                                                      RESULT 73
                                                                                                                                                                   ADM80624
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Gaps ; 0

0; Indels

100.0%; Score 74; DB 6; Length 17; 100.0%; Pred. No. 1.1e-06;

0; Mismatches

Best Local Similarity 100. Matches 15; Conservative

Query Match

WO2003103605-A2.

18-DEC-2003

11-MAR-2004

ADG74074;

Accormick AA,

Pogue GP

intermediates

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The invention describes a method of detecting an indicator (I) of type I diabetes in a subject. The method comprises obtaining a biological sample from the subject, contacting the sample with a proinsulin peptide compound (II) which stimulates an immunological response by T cells of type I diabetic subjects and detecting an immunological activity in the sample against (II) in the subject. The method is useful for detecting an indicator of type I diabetes in a subject. Also described is a method is useful for inhibiting the development or progression of type I diabetes in a subject. This is the amino acid sequence of a tetanus toxoid peptide associated with the study of proinsulin peptide reactive T cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Detecting indicator of type I diabetes in subject, by contacting sample with proinsulin peptide compound stimulating immunological response, detecting immunological activity in sample against proinsulin peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Micelle, microaggregate; induction; immune response; lipopeptide; cytotoxic T-lymphocyte; epitope; lipid; helper T-lymphocyte; HTL; tetanus; toxin; vaccine; HIV; hepatitis B virus; papilloma virus; melanoma; Plasmodium falciparum; malaria.
                                                                                                       antidiabetic; immunosuppressive; type I diabetes; proinsulin; immunological response; T cell; preproinsulin; tetanus toxoid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 8; Length 17; 100.0%; Pred. No. 1.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HIV-derived lipopeptide epitope TT for mixed micelles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 3; SEQ ID NO 23; 27pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY26607 standard; peptide; 18 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human immunodeficiency virus 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                          95US-00472701.
                                                                                                                                                                                                                                                                                                                                                            17-DEC-2002; 2002US-00321717.
                                                                                                                                                                                                                                                                                                                                                                                                                94US-00272220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OYIKANSKFIGITEL 17
(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (DART-) DARTMOUTH COLLEGE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Griffin AC, Hickey WF;
                                                 Tetanus toxoid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-178909/17.
                                                                                                                                                                                        Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                            US2004002113-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                08-JUL-1994;
20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                          06-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FR2771640-A1
                                                                                                                                                                                                                                                                                                   01-JAN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY26607;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 7
80XCCCCCCCCCX8X47474X6X1X6X6X6X6X6X8XXXXXX8XX6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention provides a method for generating virus-like particle (VLP) vaccines in an adaptable, predictable, stable and scaleable manner.

Methods are provided for making vaccines made of re-assembled VLPB.

C First, the VLPB are disassembled into encapsidation intermediate

C First, the VLPB are disassembled into encapsidation intermediate

C Formal conjugation of unique peptide or nucleic acid moieties to form

Separate populations. A predetermined amount of each of the several (one

or more) different encapsidation intermediates from the different

C populations is mixed and joined, forming intext VLPB, surrounding a

c nucleic acid core, that are composed of different encapsidation

c nucleic acid core, that the reassembled VLP displays more than one

peptide or nucleic acid. The nucleic acid can function as a scaffold and

c can also be engineered to express an immunomedulatory protein in a

c eukaryotic cell. The VLP is useful as a vaccine against viral or

Dacterial pathogens, an anti-allergy medication, and a diagnostic reagent

or a combinatorial chemistry reagent (all claimed). Tobacco mosaic virus

(TMV) was used as a VLP carrier in examples from the invention, in which

copitope sequences were fused in-frame to the TMV UI coat protein. TMV

CC VLPS were reassembled in vitro decorated with a single epitope

(monovalent) or with a collection of different epitopes (multivalent).

The present sequence is that of teanus toxoid immunostimulatory peptide,

proving the present sequence is that of teanus toxoid immunostimulatory peptide,

proving the present sequence is that of teanus toxoid immunostimulatory peptide,

proving the present sequence is that of teanus toxoid immunostimulatory peptide,

proving the present sequence is that of teanus toxoid immunostimulatory peptide,

proving the present sequence is that of teanus toxoid immunostimulatory peptide,

proving the present sequence is that of teanus toxoid immunostimulatory peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         allergy medication or a diagnostic reagent, comprises disassembling a tobacco mosaic virus and forming intact VLP of one or more encapsidation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Preparing a virus-like particle (VLP), useful as a vaccine, an anti-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nguyen LV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 8; Length 17; 100.0%; Pred. No. 1.1e-06; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lindbo JA,
                                                                                                    Petanus immunostimulatory epitope P2 TT 830-846.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; SEQ ID NO 14; 86pp; English.
                                                                                                                                                           Epitope, virus-like particle; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Smith ML, Palmer KE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADJ25950 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LARG-) LARGE SCALE BIOLOGY CORP.
                                                                                                                                                                                                                                                                                                                                                                                    06-JUN-2003; 2003WO-US018247.
                                                                                                                                                                                                                                                                                                                                                                                                                                     07-JUN-2002; 2002US-0386921P.
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                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein were unsuccessful,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 100.
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                                                                                                                                                                                                               Clostridium tetani.
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Gaps

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CTL; HBV; p53;

Sequence 17 AA;

Query Match

Best Loca Matches

ò a 04-JUN-1999

ADJ25950

SXXX

RESULT 75 ADJ25950

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Sequence 18 AA;
                                                                                                                                                                                                                                                                                                                                                07-AUG-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-DEC-1999,
 Bonnet D,
                                                                                                                                                                                                                                                                                                                             AAY99055;
                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                       RESULT 78
AAY99055
                                                                                                                                                                                                                        Matches
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                                                                                                                                                                              The invention relates to the generation of mixed micelles or microaggregates for inducing an immune response comprise: (a) a first lipopeptied comprising at least one CTL (cytotoxic T-lymphocyte) epitope and at least one lipid unit; and (b) a second lipopeptied comprising at least one HTL (helper T-lymphocyte) epitope and at least one lipid unit different from that of the first lipopeptide. This peptide represents an example of a lipopeptide epitope used in the invention and is derived from HIV-1. The immunogenic lipopeptide micelles are used in vaccines, especially against HIV, hepatitis B virus (HBV), papilloma viruses, p53, melanoma or Plasmodium falciparum malaria
                                                                                                                                Immunogenic lipopeptide micelles - comprising lipopeptides containing cytotoxic and helper T\textsubscript e epitopes.
                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18
/note= "COCH2NHNH2 attached to amidated residue"
                                                                                                                                                                                                                                                                                                                              .;
0
                                                                                     Tartar A;
                                                                                                                                                                                                                                                                                                        100.0%; Score 74; DB 2; Length 18; 100.0%; Pred. No. 1.2e-06; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide TT functionalised by alpha-hydrazinoacetyl groups.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lipophilic vector; aldehyde; hydrazone; cell screening; hormone targeting; neuropeptide.
                                                                                    Wieruszeski JM,
                                            (INRM ) INSERM INST NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note= "H attached"
                                                                                                                                                                                                                                                                                                                                                                                                               Ā
                                                                                  Gras MH, Bossus M, Lippens G, Guillet JG, Bourgault VI;
                                                                                                                                                             Claim 11; Page 47; 60pp; French
                                                                                                                                                                                                                                                                                                                                                                                                             ABB09794 standard; peptide; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PASTEUR LILLE.
CENT NAT RECH SCI.
                                                      CNRS CENT NAT RECH SCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-SEP-2000; 2000FR-00011451.
        97FR-00015246,
                          97FR-00015246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-SEP-2001; 2001WO-FR002787
                                                                                                                                                                                                                                                                                                                                               1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                          OYIKANSKFIGITEL 15
                                                               (INSP ) INST PASTEUR LILLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                               WPI; 1999-349509/30.
                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                       Sequence 18 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200220558-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Modified-site
       03-DEC-1997;
                          03-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (INSP ) INST
(CNRS ) CNRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-JUL-2002
                                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lipophilic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                 ABB09794;
                                                       CNRS )
                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 77
                                                                                                                                                                                                                                                                                                                                                                                                       ABB09794
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The specification describes a process for binding a peptide to a lipophilic vector having an aldehyde function, through formation of a hydrazone, in solution. The lipophile is non-peptidic and is of a formula given in the specification. The lipid-peptide bond is stable and the process is simpler to carry out than known methods, being in solution with a totally deprotected peptide. The method is used for cell screening and targeting of hormones and neuropeptides through physiological barriers e.g. cell membranes. The present peptide is functionalised by alpha-hydrazinoacetyl groups, and is used in the course of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention relates to a new pharmaceutical composition comprising a unit dose form of a peptide, or analogue, comprising an epitope selected from those represented by peptides AAY98812-Y99339 which are derived from various antigens for various human leucocyte antigen class DR molecules, representative of the world wide population. The peptide/analogue binds to an HLA class II molecule at an IC-50 of less
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New compositions containing immunogenic peptide epitopes for various HLA class II DR molecules useful for inducing helper T cell response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human leucocyte antigen; HLA class II; antigen epitope; pharmaceutical; immune response; chronic viral disease; cancer; autoimmune disease; rheumatoid arthritis; multiple sclerosis; myasthenia gravis; AIDS; allograft rejection; allergy; lyme disease; hepatitis; prostate cancer; glomerulonephritis; food hypersensitivity; malaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
                                                                                                                                                                  Peptides linked to lipophilic aldehyde vectors enable hormones and neuropeptides to pass through physiological barriers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ch 100.0%; Score 74; DB 5; Length 18; Similarity 100.0%; Pred. No. 1.2e-06; 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HLA class II binding antigen epitope peptide #244.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY99055 standard; peptide; 19 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sidney J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 44; 60pp; English.
Melnyk O;
                                                                                                                                                                                                                                                                                                         Example; Page 16; 56pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-US012066
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sette A, Southwood S,
Bourel L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (EPIM-) EPIMMUNE INC
                                                                        WPI; 2002-329866/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-097143/08
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us-09-806-703a-12.rag

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than or equal to 1,000 nM. The pharmaceutical can be used to induce a helper T cell response. The pharmaceutical focuses the immune response covards selected determinants and could therefore be used in cases of chical diseases and cancer. Examples of diseases that can be tracted using the peptide containing pharmaceutical include autoimmune diseases (rheumatoid arthritis, multiple solerosis, and myssthenia gravis), allograft rejection, allergies, lyme disease, hepatitis, poststreptococcal endocarditis or glomerulonephritis and food streptococcal endocarditis or glomerulonephritis and food streptococcal endocarditis or glomerulonephritis and food responses against other immunogens administered with the peptides. Diseases which can be treated using immunogenic mixtures include prostate cancer, hepatitis B, hepatitis C, AIDS, renal carcinom, cravical carcinom, lymphoma, and condyloma acuminatum. The peptides may also be used to make monoclonal antibodies useful as potential diagnostic or therapeutic agents. The peptides may be useful as diagnostic crasgents, for example, to determine the susceptibility of an individual condyloma the susceptibility of an individual condyloma the susceptibility of an individual condyloma the susceptibility of an individual condyloma the susceptibility towards conserved development of epitope based vaccines particularly towards conserved conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility towards conserved contained the susceptibility to the c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       variability such as HIV, HCV and Malaria
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Sequence 19 AA;

Gaps ö 100.0%; Score 74; DB 3; Length 19; 100.0%; Pred. No. 1.2e-06; 0; Indels Mismatches ; ; 1 QYIKANSKFIGITEL 15 3 QYIKANSKFIGITEL 17 Query Match Best Local Similarity 100.0hes 15; Conservative ઠે 셤

AAM99517 standard; peptide; 19 AA AAM99517; RESULT 79 AAM99517

Vaccine related MHC ligand peptide SEQ ID NO:620. 07-DEC-2001. (first entry)

Glutamic acid; glutamine; vaccine; major histocompatibility complex; MHC; immunomodulator; antiallergic; endocrine; neuroprotectant; virucidal; bactericidal; antiparasitic; fungicidal; cytostatic; medicine; pharmaceutical; immune disorder; immune deficiency; autoimmune; hypersensitivity; allergy; graft rejection; infection; hormonal disorder; central nervous system disease; cancer; melanoma; anti-melanoma vaccine; human immunodeficiency virus.

WO200170772-A2.

27-SEP-2001

22-MAR-2001; 2001WO-FR000872.

23-MAR-2000; 2000FR-00003711.

(FABR) FABRE MEDICAMENT SA PIERRE.

Goetsch L; Corvaia N, Beck A, Klinguer-Hamour C,

WPI; 2001-611470/70.

Stabilized pharmaceutical containing N-terminal glutamic acid or glutamine, useful e.g. in anti-melanoma vaccines, is an addition salt with strong acid.

Claim 9; Page 136; 149pp; French.

The present invention describes a pharmaceutical compound (I) that contains an N-terminal glutamic acid (Glu) or glutamine (Gln) residue in the form of an addition salt with a strong, physiologically acceptable acid (II). Also described are: (a) a pharmaceutical composition acid (II). Also described are: (a) a vaccine containing at least one (I) (b) a vaccine containing at least one (I) where this is a major histocompatibility complex (MFC) ligand (Ia); (c) a method for in vitro diagnosis of diseases associated with the presence of (Ia); (d) a kit for method (c) that includes a (Ia); and (e) a process of the preparing (I). (I) has immunomedulator, endocrine, antiallargic, neuroprotectant, virucidal, bactericidal, antiparastic, fungicidal and cytostatic activities. (I) are useful, in human or veterinary medicine, imparanceutical compositions (for treating immune disorders, e.g. immune deficiency, autoimmune states, hypersensitivity, allergy, graft rejection, infection, hormonal disorders and central nervous system creatment or prevention of: (I) viral, bacterial, parastic or fungal infections; or (ii) of cancers. A patricular application is in antimications, or (ii) of cancers. A patricular application is in antimuland associated with interactions between MHC and (I), e.g. melanoma and human immunodeficiency virus infection. AMM98898 to AMM98952 represent invention clamunodeficiency virus infection. Compounds from the present invention

Sequence 19 AA;

ö Gaps ö 100.0%; Score 74; DB 4; Length 19; 100.0%; Pred. No. 1.2e-06; 0; Indels 0; Mismatches 15; Conservative Query Match Best Local Similarity Matches

1 QYIKANSKFIGITEL 15

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ADH09986 RESULT

ADH09986 standard; peptide; 20 AA.

ADH09986;

(first entry) 11-MAR-2004

Modified tetanus toxoid T-helper epitope.

Maleimide cluster; multivalent peptide; multivalent protein; peptide synthesis; vaccination; peptide drug delivery; drug targeting; protein folding; cholic acid core; tetanus toxoid; T-helper epitope.

Synthetic. Clostridium tetani.

20 /note= "C-terminal amide" Location/Qualifiers 20-JUN-2003; 2003WO-US019779. WO2004000802-A2. Key Modified-site 31-DEC-2003.

(UYMA-) UNIV MARYLAND BIOTECHNOLOGY INST.

20-JUN-2002; 2002US-0390776P.

Singh S; Ni J, Li H, Wang L,

WPI; 2004-156401/15.

Maleimide cluster comprising core molecule, carbohydrate core, cholic acid core, useful as template for assembling multivalent peptide.

Example 9; Fig 10; 63pp; English

that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of

The invention relates to a maleimide cluster for multivalent peptide synthesis. The maleimide cluster can comprise a core to which five or more maleimides are each attached via a linker, or it can comprise a carbohydrate or cholic acid core to which two or more maleimides are eached attached via a linker. The invention also relates to a multivalent peptide or protein comprising a maleimide cluster with identical or different peptides or proteins covalently attached to the maleimide, production of a multivalent peptide or protein; methods of vaccination, peptide drug delivery or drug targeting using the maleimide cluster; and methods of raising polyclonal or monoclonal antibodies using the maleimide cluster; and maleimide cluster. The maleimide cluster is useful as a template for the assembly of multivalent peptides. These may be used in vaccination, for peptide drug delivery or for studying protein folding. A targeting protein may also be attached to maleimide clusters to facilitate the targeting of a compound to specific cells or organelles. The present cargeting of a compound to specific cells or organelles. The present maleimide cluster in an example of the invention. ö Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease. Gaps ö Length 20; Indels ; Score 74; DB 8; 1; Pred. No. 1.3e-06; 0; Mismatches 0; Tetanus toxoid epitope fusion construct #16. AAB46196 standard; peptide; 22 AA. 100.0%; 100.0%; 26-MAY-2000; 2000WO-US014810 20 1 QYIKANSKFIGITEL 15 04-APR-2001 (first entry) Best Local Similarity 100. Matches 15; Conservative OYIKANSKFIGITEL Clostridium tetani Sequence 20 AA; WO200072880-A2. 07-DEC-2000. AAB46196; Query Match RESULT 81 AAB46196 g S

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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific antibody.
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                                                                                                                                           100.0%; Score 74; DB 4; Length 22; 100.0%; Pred. No. 1.4e-06;
                                                                                                                                                                            0; Indels
                                                                                                                                                                            Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                              toxoid 830-844 epitope AN90549.
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                                                                                                                                                                                                                                                                                                                              AAB46175 standard; peptide; 22 AA.
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                                                                                                                                                100.08; Fr.
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                                Alzheimer's disease
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                                                                                                                                                                                                                                                                                               RESULT 82
AAB46175
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This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (For receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent

Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific

Disclosure, Page 32; 143pp; English

antibody

Yednock

Bard F, Vasquez NJ,

Schenk DB,

WPI; 2001-032104/04.

99US-00322289

28-MAY-1999;

(NEUR-) NEURALAB LTD.

RESULT 83

AAB46178

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This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Fc receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of Alzheimer's disease
                                                                               Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fusion protein #15 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 4; Length 22
100.0%; Pred. No. 1.4e-06;
iive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                           Yednock T;
                                     Human APP A-beta 1-12 peptide fragment #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 60; Page 119; 143pp; English
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                                                                                                                                                                                                                                                                                           26-MAY-2000; 2000WO-US014810.
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(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aggregation; brain;
Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                           Schenk DB, Bard F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-032104/04
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Best Local Similarity
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                                                                                                                                                                  Homo sapiens
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04-APR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antibody.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises antibody bate fragments in the brain of a patient, which comprises antibody binds to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (FC receptor mediated phagocytosis) against it (b) a polypeptide containing that induces an immunogenic response gainst residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invantion have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                 Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific antibody.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yednock T;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Page 31; 143pp; English.
                                                                                                                                                              AAB46178 standard; peptide; 22 AA.
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                 QYIKANSKFIGITEL
                                            8 QYIKANSKFIGITEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bard F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-032104/04.
                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani
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Matches 15; Conserv
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                                                                                                                                                                                                        AAB46178;
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Gaps

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RESULT 84

ઠે 요 AAB46203 ID AAB4 XX AC AAB4 XX

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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                    or treating disease such as Parkinson's disease characterized
                                                                                            Lewy bodies or alpha-synuclein aggregation in brain by administering ant that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fusion protein #31 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 74; DB 8; Length 22; Pred. No. 1.4e-06;
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                                                                                                                                                                               Disclosure; SEQ ID NO 33; 78pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                       WPI; 2004-411388/38.
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                                                                                                                 agent that in
beta-amyloid.
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                                                                       Preventing
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                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
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                                                                                                                                                                                                                                                                                            Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
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                                          31-OCT-2003; 2003WO-US034527.
                                                                                     01-NOV-2002; 2002US-0423012P
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Matches 15; Conservative
                                                                                                                               (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
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21-MAY-2004
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Query Match

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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alpha-synuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
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100.0%; Pred. No. 1.4e-06;
v.cmatches 0;
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98US-0105011P
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Best Local Similarity
Matches 15; Conserv
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          associated with cancers (i.e. self-proteins), for example, heSM, heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting shuultaneous presentation by antigen producing calls (APCs) of the animals immune system of: (1) at least 1 CTL (cyctoxic Tlymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope (eg. P2 and/or P3) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively
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immunogenic cell-associated peptide antigens (PA) such as those
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100.0%; Pred. No. 1.7e-06;
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Best Local Similarity
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                                                                                                                                                                                                                                       Sequence 25 AA;
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immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (i.e. self-proteins), for example, hPSM, hArsequin 2 (Herz) and/or fibroblast growth factor 8b (FGFBb). The method comprises effecting simultaneous presentation by antigen producing cells (APCB) of the animals immune system of: (1) at least 1 GTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 first T helper derived from the ell-associated PA; and (2) at least 1 B-cell group derived from the ell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and human/murine FGFBb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope (e.g. P2 and/or P30) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGFBb and Herz, respectively
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                                                                                                                                                                                                                                                                                                100.0%; Score 74; DB 3; Length 25; 100.0%; Pred. No. 1.7e-06;
                                                                                                                                                                                                                                                                                                                                    0; Indels
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                                                                                                                                                                                                                                                                                                                                      0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY92651 standard; peptide; 25 AA.
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/label= P2
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                                                                                                                                                                                                                                                                                                             Local Similarity 100.
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                                                                                                                                                                                                                                                               Sequence 25 AA;
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                                                                                                                                                                                                                                                                                                  Query Match
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Matches
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            associated with cancers (i.e. self-proteins), for example, hPSM, heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APC9) of the animals immune system of: (1) at least 1 CTL (cytotoxic Tlymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to he animal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial part of all known at least one foreign T helper epitopes of the respective PA and including at least one foreign T helper epitope (e.g. P2 and/or P30) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; creutzfeld-Jakob disease; Kuru; haemodialysis-asssociated bara-2-mioroglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amyloid beta/tetanus toxoid immunogenic fusion protein, SEQ ID NO:28.
immunogenic cell-associated peptide antigens (PA) such as those
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                                                                                                                                                                                                                                                                                                                           100.0%; Score 74; DB 3; Length 25; 100.0%; Pred. No. 1.7e-06; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                         Query Match 100.
Best Local Similarity 100.
Matches 15; Conservative
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Chimeric.
                                                                                                                                                                                                                                                                                     Sequence 25 AA;
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27-MAR-2001
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AAB49092
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Component. The invention area of a meritod for detailming the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders include Alzheimer's disease characterised by actient. Such disorders include Alzheimer's disease characterised by amyloid beta peptide (ibril deposits; type 2 diabetes characterised by islet amyloid protein peptide (IAPP, amylin) fibrils; reactive systemic amyloid obeta peptide (ibril deposits; type 2 diabetes characterised by tislet amyloid serum amyloid A protein (inflammatory diseases (e.g., cheumatoid arthritis, osteomyelitis, tuberculosis) characterised by AATTR fibrils derived from serum amyloid A protein (ApoSSA); systemic senile amyloidssis and familial amyloid cardiomyopathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform cencephalopathies (e.g., creutzfeld-Jakob disease, Kuru) characterised by C prion protein deposits; and beta-2-microglobulin deposits which form as a represents an immunogenic fusion protein comprising an amyloid beta composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-
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component. The invention also relates to a method for determining the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 74; DB 4; Length 25; 100.0%; Pred. No. 1.7e-06; Live 0; Mismatches 0; Indels
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94US-00229275.
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10-SEP-1995 (first entry)
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Matches 15; Conservative
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14-APR-1994;
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stimulator is linked to apptide or protein hapten containing a cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes oncent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous immune response to the coupled peptide in members of a heterogeneous companied diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequence from the invasin protein of Yersinia. Spacer amino acid comains and between the immune stimulators and hapten components. When the hapten components when the hapten components when the immune stimulators and hapten components. When the invasin domain can be omitted from the immune stimulator component. The present sequence represents an LHRH-containing, invasin-free immunogenic peptide as a bove which can be used as a potent vaccine for treating e.g. prostatic hyperplasia, androgendence archoma, prostatic archoma, testicular carchoma, cancer, or for induction of infertility. This sequence is particularly preferred. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                             Synthetic immunogenic peptides are provided in which a universal immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic peptide-based immunogen contg. IgE CH4 peptide and helper T cell epitope - useful for eliciting antibody prodn. for allergy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IgE; CH4; immunoglobulin; epsilon; immunogen; helper T cell; epitope; vaccine; allergy; antibody; constant heavy chain.
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                                  Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IgE CH4 region contg. peptide immunogen for treating allergies.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 74; DB 2; Length 27; 100.0%; Pred. No. 1.8e-06;
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                                                                                          Claim 8, 12; Page 84; 213pp; English.
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94US-00328912.
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WPI; 1994-357910/44.
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25-OCT-1994;
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AAR82596
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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which
            AAR82592-R82600 and AAR83560-R83581 are peptide immunogens that are useful in vaccines for treating allergic reactions. In the immunogens, an IgE CH4 peptide is attached C-terninally to a series of amino acids including a helper T cell epitope. The immunogen may also opt. contain a fatty acid or fatty acid derivative, an invasin domain or alpha-NH2. The immunogen produces high titres of antibodies to the effector site in human IgE heavy chain (the CH4 domain peptide) which inhibit mast cell activation and reduce allergen-induced IgE prodn. The immunogens may be used in either a radially branching multimeric form or a linearly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Amyloid beta/tetanus toxoid immunogenic fusion peptide, SEQ ID NO:10.
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                                                                                                                                                                                                                                                              100.0%; Score 74; DB 2; Length 27; 100.0%; Pred. No. 1.8e-06;
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(first entry)
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Best Local Similarity
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Chimeric.
                                                                                                                                                                                                                              Sequence 27 AA;
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27-MAR-2001
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cc involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The prognosis of improved status with respect to the disorder. The patient of improved status with respect to the disorder. The patient of disorders characterised by anyloid beta peptide fibril depositis; type 2 disbetes characterised by attent. Such disorders include Alzheimer's disease characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by anyloid protein peptide (IAPP, amyloin fibrils, reactive systemic myloidosis associated with systemic inflammatory diseases (e.g., amyloidosis and familial amyloid cardiomyopathy characterised by ATTR cfibrils derived from serum amyloid ardiomyopathy characterised by ATTR clibrils derived from transthyretin (TTR); transmissible spongiform encephalopathies (e.g. Creutzfeld-Jakob disease, Kunl) characterised by Creutsent of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein comprising an amyloid beta composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-COMPOSITION to standardise OS field)
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Pred. No. 1.8e-06;
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100.0%; Pre
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Clostridium tetani
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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits camyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a prognosis of apatient the serum immunoreactivity of at least four times a base line serum immunoreactivity of at least four times a base line serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The prognosis of improved status with respect to the disorder. The wide variety of disorders include Alzheimer's disease characterised by adient. Such disorders include Alzheimer's disease characterised by amyloid beta peptide fibril deposite; type 2 diabetes characterised by amyloid dathritis, osteomyelitis, tuberculosis) characterised by AA fibrils derived from serum amyloid A protein (ApoSAA); systemic semile amyloid serum amyloid A protein (ApoSAA); systemic semile amyloid serum amyloid A protein (ApoSAA); systemic semile canyloid serum amyloid A protein (ApoSAA); systemic semile canyloid serum amyloid A protein (ApoSAA); systemic semile canyloid serum amyloid A protein (ApoSAA); systemic semile canyloid care are amyloid serum amyloid actaiomyopathy characterised by ATR fibrils derived from transthyretin (TTR); transmissible spongiform corent deposits; and beta-2-microglobulin deposits which form as a represent an immunogenic fusion protein comprising an amyloid beta composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 27;
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Best Local Similarity 100.v
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WPI; 2003-778890/73.

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                                                                                                                                      from human LHRH. This is an example of peptides that can be used in claimed immunostimulatory complexes of the invention that are specifically adapted to act as adjuvant and as peptide immunogen munogen stabiliser. The complexes comprise a CpG oligonucleotide and a biologically active peptide immunogens. The complex is particulate and can to produce an immune response. The complexes may be prepared with various ratios of peptides to CpG oligonucleotides and prepared with various ratios of peptides to CpG oligonucleotides to provide different physical properties, such as the size of the microparticle. An immunostimulatory complex comprising the present LHRH derived peptide can be used in a vaccine for prostate cancer.
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                                                                                                                            derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stabilized immunostimulatory complex useful for treating allergy, HIV infection or prostate cancer, comprising cationic peptide immunogen and anionic CpG oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to an immunostimulatory complex specifically adapted to act as adjuvant and as a peptide immunogen stabiliser. The invention is useful for preparing a water-in-oil emulsion, suspension vaccine. It is also useful for treating prostate cancer, hormone ablation, allergy, HIV infection, foot-and-mouth disease, etc. The
                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
               Stabilized immunostimulating complex, useful for vaccination, e.g. against human immune deficiency viruses, comprises cationic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Immunostimulatory complex; adjuvant; peptide immunogen stabiliser; water-in-oil emulsion; suspension; vaccine; prostate cancer; hormone ablation; allergy; HIV infection; foot-and-mouth disease; therapy; human; antigen; LHRH.
                                                                                                                            present sequence is that of a synthetic immunogenic peptide
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                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 7; Length 27; 100.0%; Pred. No. 1.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                   immunogen and anionic oligonucleotide.
                                                                                    Claim 17; SEQ ID NO 7; 159pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 17; SEQ ID NO 7; 63pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human LHRH immunogenic peptide #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADJ56906 standard; peptide; 27 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                              15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                     Sequence 27 AA;
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OYIKANSKFIGITEL 17
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                                                                                                                                                                                                                                                                                                                                      WO9526365-A1.
                                                                                                                                                                                                                                        13-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                 24-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                    28-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                               25-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                           05-OCT-1995.
                                                     Sequence 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         treatment.
                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                  AAR83561;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wang CY;
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Matches
                                                                                                                                                                        RESULT 99
                                                                                                                                                                                    AAR83561
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer),
 present sequence is human LHRH immunogenic peptide used in the invention.
                                                                                                                                                                                                                                                 Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-call peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Gonadotrophin releasing hormone epitope"
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                                                                                                                                                                                                                                                                                                                                                                                           /note= "Tetanus toxoid sequence (830-844 aa)"
                                         Length 27;
                                                               IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Amidated glycine or glycinamide"
                                         100.0%; Score 74; DB 8; I 100.0%; Pred. No. 1.8e-06;
                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                 "Spacer peptide"
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                                                                                                                                                               AAU11422 standard; peptide; 28
                                                                                                                                                                                                                              Synthetic immunogen peptide 3.
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                                                                                    1 OYIKANSKFIGITEL 15
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                                                                Conservative
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                                                                                                                                                                                                                                                                                                                   Clostridium tetani.
                                                    Local Similarity
les 15; Conserv
                      A)
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                                                                                                                                                                                                         12-MAR-2002
                     Sequence 27
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                                                                                                                                                                                                                                                                                                                                      Synthetic.
Chimeric.
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                                         Query Match
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Matches
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endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is a synthetic immunogen of the invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IGE; CH4; immunoglobulin; epsilon; immunogen; helper T cell; epitope; vaccine; allergy; antibody; constant heavy chain.
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Pred. No. 1.9e-06;
; Mismatches 0;
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100.0%; Pred. No. 1.9e-06;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                         100.08; Fr.
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94US-00328912.
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                                                                                                                                                                                                                   100.08;
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                                                                                                                                                                                                                   Query Match 100.
Best Local Similarity 100.
Matches 15; Conservative
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Dermatophagoides pteronyssinus.
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a method of assessing human immunodeficiency virus and producing human immunodeficiency antibodies by in-vitro immunisation, which comprises: (a) separating peripheral mononuclear cells from blood using density gradient centrifugation; (b) treating the mononuclear cells with L-leucyl-L- leucine methyl ester; and (c) using the present antigen fragment, which is formed by coupled T and B cells, in a culture medium of human serum, IL-2 and T cells to effect cultivation and achieve in vitro immunisation
                                                                                                                                                                                                                                                                                                                     Induction of neutralising human monoclonal antibodies against human immuno:deficiences - by sepg. peripheral mono:nuclear cells from blood using density gradient centrifugation, and treating cells by L-leucyl-L-leucine methyl ester etc.
                                                                                                                      HIV; human immunodeficiency virus; immunisation; monoclonal antibody.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiallergic, antiasthmatic; antiinflammatory; dermatological; immunosuppressive; vaccine; rhinitis; sinusitis; bronchial asthma; atopic dermatitis; acute urticaria; chronic urticaria; gastro-intestinal syndrome; food allergan; oro-pharyngeal syndrome; anaphylactic reaction; drug hypersensitivity; allergic reaction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tetanus toxoid T cell epitope and Der pII B cell epitope peptide.
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                                AAR44398 standard; peptide; 30 AA.
                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page; 36pp; Chinese.
                                                                                                                                           Human immunodeficiency virus
                                                                                                                                                                                                            92TW-00103240
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                                                                          (first entry)
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nes 15; Conservative
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                                                                                               HIV antigen fragment
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 30 AA;
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                                                                                                                                                                                                                                24-APR-1992;
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                                                                          08-NOV-1994
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                                                     AAR44398;
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            RESULT 100
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                        AAR4439
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The present invention describes a compound (I) for the prevention and/or treatment of allergy. The compound comprises at least one allergen antigenic determinant (i) recognised by a B call or an antibody secreted by a B call of an antibody secreted ceraminant (ii) different from the allergen that triggers T cell activation. (I) has antiallergic, antiasthmatic, antimflammatory. dermatological and immunosuppressive activities, and can be used in a vaccine. (I) may be used in a pharmaceutical or cosmetic medicament to treat and/or prevent allergies or a disease of allergic origin, cspecially hypersensitivities. These include thintis, sinusitis, bronchial asthma, atopic dermatitis, some forms of acute and chronic urticaria, gastro-intestinal syndromes associated with the ingestion of food allergens, oro-pharyngeal syndrome, anaphylactic reactions cassociated with drug hypersensitivities and/or a mixture of these. The use of (I) in the treatment of allergic conditions avoids the need for drug treatment, which often causes undesirable side-effects. Also, prior
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New compound for prevention and treatment of allergies comprises at least one allergen antigenic determinant recognized by a B cell and at least one antigenic determinant which does not trigger T cell activation.
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luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
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                                                                                                                                                                                                                                                                                99WO-BE000092.
                                                                                                                                                                                                                                                                                                                                                               98EP-00870167.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Saint-Remy J, Jacquemin M;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-422470/36.
Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 31 AA;
                                                                                                                     WO200006694-A2.
                                                                                                                                                                                                                                                                                20-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                      (UNIO ) UCB
                                                                                                                                                                                                10-FEB-2000
                                         Synthetic.
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20-JUL-1999;
                                                                                                                                                        30-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-AUG-2004
                                                                                                              10-FEB-2000
                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADP02886;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADP02886
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GRRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GRRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (Of the breast, uterins and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is a synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                    Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper I-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                    /label= OTHER
/note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T cell epitope; B cell epitope; allergy; allergen; antigenic; antiallergic; antiasthmatic; antiinflammatory; dermatological; immunosuppressive; vaccine; rhinitis; sinusitis; bronchial asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tetanus toxoid T cell epitope and Der pII B cell epitope peptide.
                                                                /note= "Gonadotrophin releasing hormone epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                            /note= "Tetanus toxoid sequence (830-844 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 74; DB 5; I 100.0%; Pred. No. 2.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                         11. .16
/note= "Spacer peptide"
                                            Location/Qualifiers
                                                                                                                                                                                                                                                                             Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ā
                                                                                                                                                                                                                                                                                                                                                                           Claim 11; Page 10; 43pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY82636 standard; peptide; 32
                                                                                                                                                                                                           04-MAY-2001; 2001WO-US014363.
                                                                                                                                                                                                                                 05-MAY-2000; 2000US-0202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunogen of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 100 tes 15; Conservative
                                                                                                                                                                                                                                                                            Michaeli D,
                                                                                                                                                                                                                                                                                                 WPI; 2002-049440/06.
                                                                                                                                                                                                                                                      (APHT-) APHTON CORP
                                                                           Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 31 AA;
                                                                                                                                                                 WO200185763-A2
                                                                                                                                                                                                                                                                                                                                                        or its analog.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-AUG-2000
                                                                                                                                                                                      15-NOV-2001
Mammalia.
Synthetic.
                                                                                                                                                                                                                                                                           Grimes S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY82636;
                     Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                    Peptide
                                                                                                           Peptide
                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 103
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Matches
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ID AAY8
XX AC AAY8
XX O7-A
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The present invention describes a compound (I) for the prevention and/or treatment of allergy. The compound comprises at least one allergen anticalization of the prevention of anticalization of the comprises at least one allergen anticalization of the constant (I) recognised by a B cell or an anticalization of determinant (II) has anticalization that triggers T cell activation. (I) has anticalization anticalization can be used in a cernactological and immunosuppressive activities, and can be used in a vaccine. (I) may be used in a pharmaceutical or cosmetic medicament to treat and/or prevent allergies or a disease of allergic origin, benchial asthma, atopic dermatitis, some forms of acute and chronic uricaria, gastro-intestinal syndromes associated with the ingestion of cod allergens, oro-pharyngeal syndrome, anaphylactic reactions associated with drug hypersensitivities and/or amixture of these. The use of (I) in the treatment of allergic conditions avoids the need for drug treatment, which often causes undesirable side-effects. Also, prior art drug therapise alleviate symptoms, but do not influence thair causes, however (I) actually combats the cause of an allergic reaction. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New compound for prevention and treatment of allergies comprises at least one allergen antigenic determinant recognized by a B cell and at least one antigenic determinant which does not trigger T cell activation.
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atopic dermatitis; acute urticaria; chronic urticaria; gastro-intestinal syndrome; food allergen; oro-pharyngeal syndrome; anaphylactic reaction; drug hypersensitivity; allergic reaction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence represents a specifically claimed compound peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tetanus toxoid amino acids 830-844 and 947-967for fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 8; Page 35; 50pp; English.
                                                                                                                                                                    Dermatophagoides pteronyssinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98EP-00870167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-BE000092
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Saint-Remy J, Jacquemin M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-422470/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                    Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 32 AA;
                                                                                                                                                                                                                                                                                                                                            WO200006694-A2.
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Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytocxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten components. When the hapten is LHRA, then optionally the invasin domain can be omitted from the immune stimulator component. The present sequence is an example of a cg-Gg-Th-GG-invasin immune stimulator to which a hapten can be bonded.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Helper T cell epitope; universal immune stimulator; invasin; hapten;
                                                                                                                                                                                                                                                                   Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "tetanus toxin helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 2; Length 37; 100.0%; Pred. No. 2.5e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Universal immunostimulator having GG spacers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .16
/note= "invasin domain"
                                                                                                                                                                                                                                                                                                                    Disclosure; Page 95; 213pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR65383 standard; peptide; 37 AA.
                                                                                           93US-00057166.
94US-00229275.
                                                              94WO-US004832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
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                                                                                                                                                                                                        Zamb T;
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(first entry)
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Best Local Similarity 100.
Matches 15; Conservative
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/note= "t
                                                                                                                                                                                                      Ladd AE, Wang CY,
                                                                                                                                                                                                                                       WPI; 1994-357910/44
                                                                                                                                        (LADD/) LADD A E (WANG/) WANG C Y (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 37 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tetanus toxin.
 WO9425060-A1
                                                              28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9425060-A1
                                                                                           27-APR-1993;
14-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-2003
21-SEP-1995
                               10-NOV-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
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Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alpha-synuclein aggregation. This sequence corresponds to a linear fusion of the tetanus toxoid peptide corresponding to amino acid 810-844 and 947-
                                                                                                                                                                                                                                                                            Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Helper T cell epitope; universal immune stimulator; invasin; hapten;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö

    .19
/note= "tetanus toxin helper T cell epitope"

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Universal immunostimulator having GG spacers.
                                                                                                                                                                                                                                                                                                                                                             Disclosure; SEQ ID NO 19; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22. .37
/note= "invasin domain"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR65389 standard; peptide; 37 AA.
                                                                                                        31-OCT-2003; 2003WO-US034527.
                                                                                                                                        01-NOV-2002; 2002US-0423012P.
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Matches 15; Conservative
                                                                                                                                                                     (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                     Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
                                                                                                                                                                                                                                                    WPI; 2004-411388/38
              Clostridium tetani.
                                            WO2004041067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 36 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-2003
21-SEP-1995
                                                                           21-MAY-2004
                                                                                                                                                                                                                   Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
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XTTTTTXSXXXXXXXXTTTTTX
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Gaps

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99US-0137010P
                                                (NEUR-) NEURALAB LTD.
                                                                                                                        WPI; 2001-070921/08.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 43 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200072880-A2
               01-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB46177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 108
AAB46177
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic I lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HIA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequence from the invasin protein of Yersinia. Spacer amino acid sequence is allowed the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator components in the present sequence is an example of an invasin-GG-Th-GG-immune stimulator to which a hapten can be bonded.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru, haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amyloid beta/tetanus toxoid immunogenic fusion peptide, SEQ ID NO:12.
                                                                                                                                                                                                                                           Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 2; Length 37; 100.0%; Pred. No. 2.5e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                   Disclosure; Page 95; 213pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB49076 standard; peptide; 43 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2000; 2000WO-US015239.
           94WO-US004832
                                             93US-00057166.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 QYİKANSKFIĞİTEL 35
                                                                                                                                                                       Zamb T;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (revised)
                                                                                                                                                                                                         WPI; 1994-357910/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
Clostridium tetani.
                                                                                                                                                                       Wang CY,
                                                                                            (LADD/) LADD A E (WANG/) WANG C Y (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 37 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          #0200072876-A2
           28-APR-1994;
                                           27-APR-1993;
14-APR-1994;
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27-MAR-2001
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                                                                                                                                                                       Ladd AE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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Matches
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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the component appared anyloid disorder which involves measuring a patient serum immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least cfour times a base line serum immunoreactivity of at least cfour times a base line serum immunoreactivity of at least cfour times a base line serum immunoreactivity of at least cfour times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The cfour times a base line serum immunoreactivity control level indicates a prognosis of the invention are useful for treating a wide variety of disorders characterised by amyloid beta peptide fibrile Apposition in a familial deposition in a patient. Such disorders include Alabaimer's disease characterised by amyloidosis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by AA fibrils derived from serum amyloid A protein (Apposably); systemic senile amyloid castum amyloid A protein (Apposably); systemic senile camploids and familial amyloid cardiomyopathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform corresponded from transthyretin (TTR); transmissible spongiform corresponded from beta-2-microglobulin deposits which form as a result of long term haemodialysis treatment. The present sequence compensation to treat or prevent Alabaimer's disease. (Updated on 11-SEP-CC 2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ó
Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tetanus toxoid 830-844 + 947-967 epitope AN90542.
                                                                                                                                                           Disclosure; Page 45; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB46177 standard; peptide; 43 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                       OYIKANSKFIGITEL 22
                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                            1 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                           (revised)
                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (NEUR-) NEURALAB LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-070921/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                Sequence 43 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40200072876-A2
                                         beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                            11-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                      27-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-DEC-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schenk DB;
                                                                                                                                                                                                                                                                                                                                                                                       AAB49090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chimeric.
                               agent
                                                                                                                                                                                                                                                                                                                                               RESULT 110
                                                                                                                                                                                                                                                                                                                                                          AAB49090
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                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (FC receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of
                                                                                                                      Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fusion protein #14 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 4; Length 43; 100.0%; Pred. No. 3e-06; ive 0; Mismatches 0; Indels
                                                                                Yednock T;
                                                                                                                                                                Disclosure; Page 31; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADP02902 standard; peptide; 43 AA.
                                                                                Vasquez NJ,
                   26-MAY-2000; 2000WO-US014810.
                                        99US-00322289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-2002; 2002US-0423012P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-AUG-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                                                                                                                                 1 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Masliah E;
                                                           (NEUR-) NEURALAB LTD
                                                                                Bard F,
                                                                                                  WPI; 2001-032104/04.
                                                                                                                                                                                                                                                                                                               Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                                   Sequence 43 AA;
                                        28-MAY-1999;
07-DEC-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schenk DB,
                                                                               Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADP02902;
                                                                                                                                            antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 109
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Preventing or treating disease and as Parkinson's disease that careized by Lewy Dodies or alpha-synuclain and/or beta-amyloid.

Eagent that induces immunogenic response against alpha-synuclain and/or beta-amyloid.

Expectation of the paraly of the states of a method of preventing (WI) or treating a disease on immunogenic response against alpha-synuclain and/or beta-amyloid.

Expectation of administering an agent that induces an immunogenic response against alpha-synuclain and/or beta-amyloid.

Expectation of administering an agent that induces an immunogenic response against alpha-synuclain and/or beta-amyloid (Abeta) to a patient. (WI) is manufacturing an agent that induces an immunogenic response or against alpha-synuclain and/or beta-amyloid (Abeta) to a patient and administer to any administering and agent that induces among the brain of the patient. Alpha-synuclain or Abeta against alpha-synuclain and/or Sabata for a sequence or sequence characteristics of the patient. Alpha-synuclain or Abeta any sunctin and or administer to a method of the invention.

Expect and a sequence and any account of the search of the search of a fusion peptide used in the membrid of the invention.

Sequence 13 to Conservative 0, Mismatches 0, Indels 0, Gaps 0, Manuches 15; Conservative 0, Mismatches 0, Indels 0, Gaps 0, Manuches 15; Conservative expression of the patient of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the search of the searc
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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a prognosis of improved status with respect to the disorder. The cur times a base line serum immunoreactivity of at least four times a base line serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders include Alzheimer's disease characterised by aptent. Such disorders include Alzheimer's disease characterised by amyloid beta apptide fibril deposits; type 2 diabetes characterised by islete amyloid protein peptide (IAPP), amylin) fibrils; reactive systemic amyloid arthritis, osteomyelitis, tuberculosis) characterised by AT fibrils derived from serum amyloid A protein (AppSSA); systemic semile amyloid carthritis (e.g. Creutzfeld-Jakob disease, Kuru) characterised by prion protein deposits; and beta-2-microglobulin deposits which form as a result of long term haemodialysis treatment. The present sequence composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-COURCE 2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 4; Length 44; 100.0%; Pred. No. 3.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tetanus toxoid epitope fusion construct #14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                Disclosure; Page 46; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB46194 standard; peptide; 44 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-MAY-2000; 2000WO-US014810
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 100.
18 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 44 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200072880-A2.
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Matches
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ö This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Fc receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 f Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid. or treating a disease associated with amyloid deposits, Alzheimer's disease, comprises administering amyloid specific Gaps antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; ö Fusion protein #29 for treating neurodegenerative disorder. Length 44; 100.0%; Score 74; DB 4; Length 44 100.0%; Pred. No. 3.1e-06; iive 0; Mismatches 0; Indels Disclosure; Page 32; 143pp; English. ADP02917 standard; peptide; 44 AA. 31-OCT-2003; 2003WO-US034527 01-NOV-2002; 2002US-0423012P 1 OYIKANSKFIGITEL 15 8 OYIKANSKFIGITEL 22 Query Match
Query Match
Best Local Similarity luv...
Best Local Similarity luv... (first entry) (ELAN-) ELAN PHARM INC. (REGC) UNIV CALIFORNIA. Schenk DB, Masliah E; Parkinson's disease. WPI; 2004-411388/38. WO2004041067-A2. Sequence 44 AA; 12-AUG-2004 21-MAY-2004. Preventing o especially A antibody. Synthetic. ADP02917; RESULT 112 ADP0291 ઠે g

The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is

Disclosure; SEQ ID NO 50; 78pp; English.

Yednock T;

Bard F, Vasquez NJ,

Schenk DB,

WPI; 2001-032104/04

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WPI; 2002-049440/06.
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useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gonadotrophin releasing hormone; GnEH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunominic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .10
/note= "Gonadotrophin releasing hormone epitope (1. .10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18. .46 'note= "Gonadotrophin releasing hormone epitope (2-10
                                                                                                                                                                                                                                                                                  Gaps
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/note= "Other= Pyro-glutamic acid or 5-oxo proline"
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0
                                                                                                                                                                                                                                       Score 74; DB 8; Length 44;
Pred. No. 3.1e-06;
Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7. .31
note= "Tetanus toxoid (830-844 aa)"
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/note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU11430 standard; peptide; 46 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic immunogen peptide 11.
                                                                                                                                                                                                                                         100.0%;
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                                                                                                                                                                                                                                                                                                                     1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.vv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-MAR-2002 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aa) "
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clostridium tetani.
                                                                                                                                                                                                     Sequence 44 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia.
Synthetic.
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                                                                                                                                                                               The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinishing hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiseuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention
Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                androgen-dependent carcinoma; antitumour; infertility; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Helper T cell epitope, universal immune stimulator, invasin; hapten, vaccine; LHRH; luteinising hormone releasing hormone; prostate;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "tetanus toxin helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 74; DB 5; Length 46
100.0%; Pred. No. 3.2e-06;
cive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR62723 standard; peptide; 47 AA.
                                                                                                                                   Claim 11; Page 12; 43pp; English.
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(first entry)
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/note= "t
38. .47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (LADD/) LADD A E (WANG/) WANG C Y (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 46 AA;
                                                                                   or its analog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9425060-A1
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17-SEP-1995
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14-APR-1994;
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Cholesteryl ester transfer protein B cell epitope linked to T cell epitope - used to generate vaccine to regulate CETP activity for decreasing the risk of developing a cardiovascular disease e.g.

atherosclerosis.

Ξ,

Rittershaus CW,

SCI

(TCEL-) T CELL

WPI; 1996-506103/50.

96WO-US006147. 95US-00432483

01-MAY-1996;

01-MAY-1995;

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Synthetic immunogenic peptides are provided in which a universal immune timulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune seaponse to the coupled peptide in members of a heterogeneous population expressing diverse HiA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid comains and between the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator and hapten components. The present sequence represents an LHRH-containing immunogenic peptide as above which can be used as a potent vaccine for treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, edemetriosis, (severe) commenstrual syndrome or oestrogen-dependent breast cancer, or for induction of infertility. (Updated on 25-MAR-2003 to correct PN field.)
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/label= B-cell_epitope
/note= "B-cell_epitope comprises the C-terminal 16 amino
acids of human CETP, involved in neutral lipid binding or
transfer activity"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    comprises amino acids 830-843 of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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/label= B-cell_epitope
//note= "B-cell epitope comprises amino acids 349-367
human CETP"
                              Immunogenic luteiniaing hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note= "C-terminal Cys residue is present for use inking the peptide to itself or other molecules"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cholesteryl ester transfer protein; CETP; antigen; vaccine; cardiovascular disease; atherosclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 74; DB 2; Length 47; Pred. No. 3.3e-06;
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    15
    1abel= T-cell_epitope
    note= "T-cell epitope α
    cetanus toxoid protein"

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                                                                                  English.
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100.0%;
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                                                                                    Page 88; 213pp;
WPI; 1994-357910/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Key
Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 47 AA;
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Best Local
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ð a 07-NOV-1996

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                                                                                                                                                                                                                         A multivalent vaccine comprises an immunogenic helper T-cell epitope of tetanus toxoid protein covalently linked to the B-cell epitopes of human cholesterryl ester transfer protein (CETP) (see also AAW06127). The vaccine elicits an immune response against endogenous CETP activity, and is used to treat or prevent a cardiovascular disease, such as
                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Amyloid beta/tetanus toxoid immunogenic fusion protein, SEQ ID NO:27
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                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 2; Length 50; 100.0%; Pred. No. 3.5e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                     Disclosure; Page 7; 72pp; English.
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Guery Local Similarity luv...
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The 15; Conservative
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Clostridium tetani
                                                                                                                                                                                                                                                                                            atherosclerosis
                                                                                                                                                                                                                                                                                                                    Sequence 50 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB49091;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB49091
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prognosis of a patient undergoing treatment for an amyloid disorder which prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The prognosis of improved status with respect to the disorder. The wide variety of disorders characterised by amyloid fibril deposition in a patient. Such disorders include Alzheimer's disease characterised by islet amyloid beta peptide (InphP, amyloin) fibrils; reactive systemic amyloid beta peptide (InphP, amyloin) fibrils; reactive systemic amyloid osis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by the fibrils derived from serum amyloid A protein (ApoSSA)); systemic senile amyloidosis and familial amyloid cardiomyopathy characterised by ATTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                             The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the
Pharmaceutical composition comprising immunogen against amyloid component
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fibrils derived from transthyretin (TTR); transmissible spongiform encephalopathies (e.g. Creutzfeld-Jakob disease, Kuru) characterised by prion protein deposits; and beta-2-microglobulin deposits which form as result of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein comprising an amyloid beta peptide fused to a universal T-cell epitope which may be used in a composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-
                          such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 4; Length 51; 100.0%; Pred. No. 3.6e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                             Disclosure; Page 46; 140pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  to standardise OS field)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
Les 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 51 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
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Matches
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Chimeric,
                                                                                                                                                                                                                                        Region
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                                                                                                                                                                                                                                                                                   Region
                                                                                                                                                                                                                                                                                                                        Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                               Tetanus toxoid epitope fusion construct #15.
                                                                                                                                                  AAB46195 standard; peptide; 51 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-MAY-2000; 2000WO-US014810.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-00322289
1 OYIKANSKFIGITEL 15
                      8 QYIKANSKFIGITEL 22
                                                                                                                                                                                                                                      (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200072880-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-MAY-1999;
                                                                                                                                                                                                                                      04-APR-2001
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                                                                                                                                                                                           AAB46195;
                                                                                                          RESULT 117
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AAB46195

ò a Schenk DB, Bard F, Vasquez NJ, Yednock T;

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                                                                                                                             This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an emyloid deposit and induces a clearing response (Fc receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 f Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vaccine, drug delivery, encapsulation, human chorionic gonadotropin, HCG, tetanus toxoid, contraceptive.
                                          or treating a disease associated with amyloid deposits,
Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Enhancing immunogenic response in mammalian subject by administering biodegradable polymeric delivery system comprising one or more antigens
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic human chorionic gonadotropin peptide antigen CTP37-TT2.
                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 4; Length 51; 100.0%; Pred. No. 3.6e-06;
                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                    Disclosure; Page 32; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (OHIS ) UNIV OHIO STATE RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADIS7373 standard; peptide; 51 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= CTP37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-JUL-2002; 2002US-0394967P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-JUL-2003; 2003WO-US021861
                                                                                                                                                                                                                                                                                                                                                                                                                                                          OYIKANSKFIGITEL 22
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/label= TT2
                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100...
These 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2004-142960/14.
            WPI; 2001-032104/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2004005325-A2.
                                                                                                                                                                                                                                                                                                                                                Sequence 51 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-JAN-2004.
                                          Preventing especially
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ADIS7373
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us-09-806-703a-12.rag

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comprises administering an immunogenic response in a mammal comprises administering a biodegradable polymeric delivery system comprises administering a biodegradable polymeric delivery system as chighly preferred embodiment, the basic additive is MGCO3 and the bioghly preferred embodiment, the basic additive is MGCO3 and the biodegradable polymeric delivery system is a poly(lactide-co-glycolide) (PLGA) microparticle. The present sequence is that of the CTP37-TT2 antigen. This synthetic antigen comprises a B-cell epitope from the creatinal portion of the beta chain of human chorionic gonadotropin (HCG residues 109-145) and a universal or promiscuous T-cell epitope from the creatinal portion of the beta chain of human chorionic gonadotropin (HCG residues 109-145) and a universal or promiscuous T-cell epitope from the includes an N-terminal Cys residue to facilitate further conjugation via a thiol group without altering the B- and T-cell epitopes. In an example from the invention, the immunogenicity of CTP37-TT2 peptide antigen was shown to be enhanced by encaptuation or surface-conjugation in PuGA microparticles. Combination of surface-conjugated and encapsulated antigen cresponse after a single dose. The stability of the encapsulated antigen cresponse after a single dose. The stability guidelines for handling the dilute solution. This may provide stability guidelines for handling the contract of antigen in solution and for its potential use as a slow-release birth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fusion protein #30 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
and one or more basic additives to mammalian subject.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 74; DB 8; L
Pred. No. 3.6e-06;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Scu-
100.0%; Pred
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                                    Example 1; Page 12; 39pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADP02918 standard; peptide; 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-OCT-2003; 2003WO-US034527.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-2002; 2002US-0423012P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OYIKANSKFIGITEL 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aggregation; brain; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-411388/38.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 51 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 119
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                                                                     the brain, by administering an agent that induces an immunogenic response against alpha-symuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-symuclein aggregation in the brain, which involves administering agent that induces immunogenic response improves motor characteristics of the patient, and the administration improves motor characteristics of the patient. Alpha-symuclein or beta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasymuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Generating an immune response to an antigen, useful for generating desired T cell responses comprises administering an immunoglobulin having one peptide epitope of the antigen attached to the immunoglobulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to a method for generating an immune response to an antigen in a patient. The method comprises administering to the patient an immunoglobulin (Ig) or its portion where the Ig has at least one peptide epitope of the antigen attached to the Ig or its portion and administering the immunoglobulin or its portion in conjunction with a RMs segment. The present sequence is an antigen sequence, used to illustrate the invention.
                                        preventing (M1) or treating a or alpha-synuclein aggregation in
                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                            .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immune response; immunoglobulin; Ig; anti-melanoma; cytostatic.
                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 8; Length 51; 100.0%; Pred. No. 3.6e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 74; DB 8; Length 54;
                                    invention relates to a method of preventing sase characterized by Lewy bodies or alpha-sy
                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Anti-melanoma drug self epitope, SEQ ID 33
Disclosure; SEQ ID NO 51; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phillips B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Fig 1K; 154pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADL90093 standard; protein; 54 AA.
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14-MAR-2003; 2003WO-US007995.
                                                                                                                                                                                                                                                                                                                                                                                                             1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                              8 OYIKANSKFIGITEL 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
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                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-295415/27.
                                                                                                                                                                                                                                                                                                                                                       Local Similarity
Les 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ASTR-) ASTRAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2004027049-A2.
                                                                                                                                                                                                                                                                                                   Sequence 51 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unidentified.
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                                                                                                                                                                                                                                                                                                                                       Query Match
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Matches
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Mature rat ghrelin with added epitopes (peptide 3), SEQ ID NO:15.

(first entry)

17-JUN-2004

ADM06902;

ADM06902 standard; peptide; 64 AA.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                      Gaps
                                                                                                                                                                                                                                                                                                                           antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
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0
                                                                                                                                                                                                                                                                                           Fusion protein #28 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 74; DB 8; Length 56; 100.0%; Pred. No. 4e-06; ive 0; Mismatches 0; Indels
                      Indels
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   Pred. No. 3.8e-06;
                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 49; 78pp; English.
                                                                                                                                                                              ADP02916 standard; peptide; 56 AA.
                    ö
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-OCT-2003; 2003WO-US034527.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-2002; 2002US-0423012P.
                                                        12
                                                                           1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                      12-AUG-2004 (first entry)
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Best Local Similarity 100.
Matches 15; Conservative
                15; Conservative
                                                      1 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Masliah E;
                                                                                                                                                                                                                                                                                                                                                aggregation; brain;
Parkinson's disease.
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 Best Local Similarity
Matches 15; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
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The invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin (or sub-sequence thereof) or a phrelin managous comprising a ghrelin B-cell epitope and non-ghrelin chemical moleties to the immune system, thereby inducing the production of antibodies against the animal's autologous ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; vectors and host cells comprising this nucleic acid; a method of identifying a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin; and use of immunogenic compositions of the invention. The method of the invention is useful for reating, preventing or ameliorating obseity or other conditions characterised by excess body fat deposite by downrequiating ghrelin to such an extent that the total amount of body fat is significantly conditions treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for upregulating ghrelin for treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for treating ghrelin and ghrelin receptor.

The invention of preventing observation or burns, in advivant therapy for in a vitro fertiless and for treating ghrelin and ghrelin receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                    Ghrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       comprising mature rat ghrelin with added epitopes used in an example of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        related cancers. The present sequence represents a ghrelin analogue
                                                                                                                                                                                    anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; rat; epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 74; DB 8; Length 64; 100.0%; Pred. No. 4.6e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; SEQ ID NO 15; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-SEP-2002; 2002DK-00001345.
12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-SEP-2003; 2003WO-DK000592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Boving TEG, Klysner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                WO2004024183-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 64 AA;
                                                                                                                                                                                                                                                                                                                                                                                                          25-MAR-2004.
                                                                                                                                                                                                                                                                                                 Rattus sp.
Synthetic.
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Gaps

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> RESULT 122 ADM06902

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ADM06903 standard; peptide; 68 AA.

(first entry)

17-JUN-2004

ADM06903;

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The invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin (or sub-sequence thereof) or a ghrelin analogue comprising a ghrelin for sub-sequence thereof) or a ghrelin analogue comprising a ghrelin for sub-sequence the immune system, thereby inducing the production of antibodies against the system, thereby inducing the production of antibodies against the analogue of the invention; a fixelin sub-sequence or a ghrelin analogue of the invention; a mucleic acid encoding a ghrelin analogue of the invention; a mucleic acid encoding a ghrelin analogue of the invention; a mucleic acid encoding a ghrelin analogue of the invention; a mucleic acid encoding a ghrelin sub-sequence or a ghrelin analogue of the invention; the invention is useful for treating, preventing or ameliorating obseity or other conditions compositions of the invention The method of the invention is useful for treating, preventing or ameliorating obseity or other conditions characterised by excess body fat deposits by downregulating ghrelin to decreased. The method may also be used for upregulating ghrelin for treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for upregulating ghrelin for treatment, prevention are analoxation of anorexia or cachexia. The method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          may also be used for treating wound or burns, in adjuvant therapy for in vitro fertilisation, and for treating sphrelin and ghrelin-receptor related cancers. The present sequence represents a ghrelin analogue comprising mature ghrelin with added epitopes used in an example of the
                                                                                                                                                                                                      Ghrelin, autologous ghrelin, ghrelin analogue, immunogen, immunisation, anti-ghrelin antibody; obesity; anorexia; cachexia; wound, burn, adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin.
                                                                                                                                                          Mature ghrelin with added epitopes (peptide 5), SEQ ID NO:17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; SEQ ID NO 17; 83pp; English.
                   ADM06904 standard; peptide; 68 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-SEP-2003; 2003WO-DK000592.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-SEP-2002; 2002DK-00001345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-SEP-2002; 2002US-0410164P
                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                      WO2004024183-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 68 AA;
                                                                                                                                                                                                                                                                                                                                                    Synthetic.
Unidentified.
                                                                                                              17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boving TEG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention.
                                                                  ADM06904;
ADM06904
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The invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin (or sub-sequence thereof) or a phrelin analogue comprising a ghrelin paralogue comprising a ghrelin b-cell epitope and non-ghrelin chemical moieties to the immune system, thereby inducing the production of antibodies against the system, thereby inducing the production of antibodies against the compositions comprising a ghrelin. The invention is compositions and host cells acid encoding a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; vectors and host cells comprising this nucleic acid; a method of identifying a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin, and use of inducing antibodies against unmodified autologous ghrelin, and use of inducing antibodies against unmodified autologous ghrelin, and use of inducing compositions of the invention is useful for treating preventing or ameliorating obesity or other conditions contracterised by axcess body fat deposits by downregulating ghrelin to decreased. The method may also be used for upregulating ghrelin for the treatment, prevention or amelioration of anorexia or cachexia. The method creatment or treating wound or burns, in adjuvant therapy for in vitro fertilisation, and for treating ghrelin and ghrelin analogue comprising mature ghrelin with added epitopes used in an example of the
                                                                                                                                                      Ghrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation; anti-ighrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin.
                                                                                                              Mature ghrelin with added epitopes (peptide 4), SEQ ID NO:16.
                                                                                                                                                                                                                                                  immunomodulator; vulnerary; vaccine; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; SEQ ID NO 16; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-SEP-2003; 2003WO-DK000592.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-SEP-2002; 2002DK-00001345.
12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Boving TEG, Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PHAR-) PHARMEXA AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                              WO2004024183-A1.
                                                                                                                                                                                                                                                                                                                 Unidentified.
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                                                                                                                                                                                                                                                                                              Synthetic
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15; Conservative

Matches

Query Match Best Local Similarity

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Gaps

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Length 68; Indels

Score 74; DB 8; L Pred. No. 4.9e-06; ; Mismatches 0;

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Conservative

Best_Local Similarity Matches 15; Conserv

Query Match

1 OYIKANSKFIGITEL 15 OYIKANSKFIGITEL 17

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100.0%; 100.0%;

Sequence 68 AA;

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Gaps

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0; Indels

Mismatches

100.0%; Sc 100.0%; Pr iive 0;

Score 74; DB 8; Length 68; Pred. No. 4.9e-06;

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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphashruclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                     antiparkinsonian, antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiparkinsonian, antibody therapy, Lewy body, alpha-synuclein, aggregation, brain, immunogenic response, beta-amyloid,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 8; Length 74; 100.0%; Pred. No. 5.4e-06; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fusion protein #27 for treating neurodegenerative disorder.
Fusion protein #9 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; SEQ ID NO 30; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADP02915 standard; peptide; 79 AA.
                                                                                                                                                                                                                                                          31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                               01-NOV-2002; 2002US-0423012P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OXIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                         (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                        Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aggregation; brain;
Parkinson's disease.
                                                                 aggregation; brain;
Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-411388/38
                                                                                                                                                                       WO2004041067-A2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 74 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  agent that ind
beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-AUG-2004
                                                                                                                                                                                                            21-MAY-2004.
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                                                                                                                                Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a parient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Foreceptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of
                                                                                                                                                                                                                                                                                             Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific antibody.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yednock T;
                                                                                                                                                                                                                                                      Tetanus toxoid epitope fusion construct #10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 32; 143pp; English.
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                                                                                                                              AAB46190 standard; peptide; 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADP02897 standard; peptide; 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-MAY-2000; 2000WO-US014810.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-00322289.
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                                                                                                                                                                                                          04-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-AUG-2004 (first entry)
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Best Local Similarity 100.
Matches 15; Conservative
  52 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (NEUR-) NEURALAB LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-032104/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 72 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                         40200072880-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADP02897;
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                                                                                     RESULT 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADP02897
ID ADP
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DT 12-
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The invention relates to a method of preventing (MI) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                              Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98. 109 / Notes "identical to residues 364-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "identical to residues 267-348 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Cys-73 may be substituted by Ser to avoid disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Growth differentiation factor 8 AutoVac construct GDF-8 P2-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 74; DB 8; Length 101; 100.0%; Pred. No. 7.6e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90....91
/note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83. .97
/note= "tetanus toxoid P2 epitope"
                                                                                                                                                                            Disclosure; SEQ ID NO 29; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB20147 standard; protein; 109 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JUL-2000; 2000WO-DK000413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30 QYIKANSKFIGITEL 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                       WPI; 2004-411388/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 101 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200105820-A2
                                                                                                                                beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
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g
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a method of preventing (MI) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                               Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 8; Length 79; 100.0%; Pred. No. 5.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fusion protein #8 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; SEQ ID NO 48; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADP02896 standard; peptide; 101 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
0
                                       31-OCT-2003; 2003WO-US034527.
                                                                            01-NOV-2002; 2002US-0423012P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-2002; 2002US-0423012P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37 QYIKANSKFIGITEL 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
                                                                                                                          (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (REGC ) UNIV CALIFORNIA
                                                                                                                                                                                               Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ELAN-) ELAN PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Masliah E;
                                                                                                                                                                                                                                      WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 79 AA;
                                                                                                                                                                                                                                                                                                                                                    beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-AUG-2004
                                                                                                                                                                                            Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-MAY-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
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Query Match Best Loca Matches

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RESULT 128

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Gaps

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Homo sapiens.
Clostridium tetani.
Synthetic.
Chimeric.
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                                                                      WO200105820-A2
                                                                                                                                                                          20-JUL-1999;
                                                                                                                                                                                            26-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-APR-2001
                                                                                                       25-JAN-2001
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB20145
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                                                                                                                                                                                                                                                      The present sequence is that of AutoVac construct GDF-8 P2-3, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 83-97 are replaced by the promiscuous tetanus toxin T-cell epitope P2 (see AAB20143). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of invention to produce a recombinant therapeutic vaccine that is capable of cate of farm animals. The vaccines (see AAB20145-5) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDP-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P2, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up conting the need for anitabiotic feed-additives. Anti-GDF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle can be also the protein and content and chronic across the farm acute and chronic across the farm acute and chronic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                        Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "identical to residues 333-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note= "identical to residues 267-317 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Cys-73 may be substituted by Ser to avoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 4; Length 109; 100.0%; Pred. No. 8.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52. .66
/note= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                       Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB20146 standard; protein; 109 AA.
                                                                                                                                                                                                                               Example 1; Page 99; 110pp; English
99DK-00001014.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-APR-2001 (first entry)
                                                                                       Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 100.
16s 15; Conservative
                                                    (MEBI-) M & B BIOTECH
                                                                                                                       MPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Misc-difference
 20-JUL-1999;
                  26-JUL-1999;
                                                                                       Halkier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB20146;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
Region
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the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 52-66 are replaced by the promiscuous tetamus toxin T-cell epitope P2 (see AAB20143). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth reaking autoclolerance against autoclogous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P2, with minimal discussance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up reducing the need for antibiotic feed-additives. Anti-GDF8 varcines can be used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 varcines can be used to treat human diseases such as cancer cachexia where muscle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             present sequence is that of AutoVac construct GDF-8 P2-2, comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        atrophy is pronounced and for patients suffering from acute and chronic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Growth differentiation factor 8, GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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                              Misc-difference 90. .91
/note= "optionally replaced by Glu-Gly"
disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Page 97-98; 110pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB20145 standard; protein; 109 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                               99DK-00001014
99US-0145275P
                                                                                                                                                                                                                                                                                                                             20-JUL-2000; 2000WO-DK000413
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Halkier T, Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-112680/12.
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Best Local Similarity
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us-09-806-703a-12.rag

Asthma, IL-5; interleukin-5; allergy, cytokine, helminthic infection, cancer; eosinophilia, vaccine; allergic rhinitis.

Mus musculus. Clostridium tetani.

WO200065058-A1.

19-APR-2000; 23-APR-1999; 06-MAY-1999;

02-NOV-2000

Modified murine interleukin-5 SEQ ID NO: 14.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is that of AutoVac construct GDF-8 P2-1, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 18-32 are replaced by the promiscuous tetanus toxin T-cell epitope P2 (See AAB20143). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P2, with minimal faturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the coding the GDF-8 variants can be used for genetic immunisation of the coding the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle.
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                                                                                                                                                                                                                                                                                                                                                                                     Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    is pronounced and for patients suffering from acute and chronic
                           1. .17
'note= "identical to residues 267-283 of human GDF-8"
                                                                                           /note= "identical to residues 299-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                   /note= "Cys-73 may be substituted by Ser to avoid disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
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                                                                                                                                                           /note= "optionally replaced by Glu-Gly"
                                                   .32
:e= "tetanus toxoid P2 epitope"
             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; Page 96; 110pp; English.
                                                                                                                                                                                                                                                                                                                                      Klysner
                                                                                                                                                                                                                                       20-JUL-2000; 2000WO-DK000413.
                                                                                                                                                                                                                                                                   99DK-00001014.
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                                                                             33. .109
                                                                                                                                                                                                                                                                                                        (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15; Conservative
                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-112680/12.
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Matches 15; Conserv
                                                                                                                                             Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 109 AA;
                                                                                                        Misc-difference
                                                                                                                                                                                    WO200105820-A2
                                                                                                                                                                                                                                                                  20-JUL-1999;
26-JUL-1999;
                                                                                                                                                                                                              25-JAN-2001
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               Key
Region
                                                    Region
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.

99DK-00000552.

(MEBI-) M & E BIOTECH AS.

WPI; 2000-672791/65.

Klysner S;

Example 2; Page 129-130; 172pp; English.

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The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Asthma, IL-5, interleukin-5, allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                  100.0%; Score 74; DB 3; Length 116;
100.0%; Pred. No. 8.8e-06;
.ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modified murine interleukin-5 SEQ ID NO: 52.
                                                                                                                                                                                                                                                                                                                                                                                                          AAB45526 standard; protein; 116 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-APR-2000; 2000WO-DK000205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99DK-00000552.
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                                                                                                                                                                                                                                                                              1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-FEB-2001 (first entry)
                                                                                                                                                                                                                                                                                                   30 QYIKANSKFIGITEL
                                                                                                                                                                                                                                          15; Conservative
                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clostridium tetani
                                                                                                                                                                     Sequence 116 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200065058-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-APR-1999;
06-MAY-1999;
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                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                          Matches
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AAB45502 standard; protein; 116 AA.

RESULT 132 AAB45502 (first entry)

26-FEB-2001

AAB45502;

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or
                proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allorgic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention is concerned with methods of treating asthma, essinophila, allergic trinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia, vaccine, allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or
amelioration of asthma or other chronic allergic conditions.
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                                                                                                                                                                                                                      Gaps
and modified IL-5
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                                                                                                                                                                                Length 118;
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involve the use of interleukin-5 (IL-5) analogues
                                                                                                                                                                            100.0%; Score 74; DB 3;
100.0%; Pred. No. 9e-06;
tive 0; Mismatches 0,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Modified human interleukin-5 SEQ ID NO: 36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 2; Page 146; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                      AAB45518 standard; protein; 118 AA.
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                                                                                                                                                                                                                                                                                   32 OYIKANSKFIGITEL
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                                                                                                  helminthic infections
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                                                                                                                                                       Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-672791/65.
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15; Conserva
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Clostridium tetani.
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                                                                                                                                        Sequence 118 AA;
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Best Local S:
Matches 15
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                                                                                                                                                       Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                        The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Asthma, IL-5; interleukin-5; allergy, cytokine; helminthic infection, cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Modified human interleukin-5 SEQ ID NO: 3
                                                                                                                                                                                                                                     Disclosure; Page 159-160; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 2; Page 120; 172pp; English
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Les 15; Conservative
              (MEBI-) M & B BIOTECH AS
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helminthic infections
                                                                                            2000-672791/65
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                                                                                            WPI; 2000-672791/
N-PSDB; AAC68879.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 116 AA;
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06-MAY-1999;
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                                                      Klysner S;
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Matches
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia, vaccine, allergic rhinitis.
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99US-0132811P.
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Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                     BIOTECH AS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            helminthic infections
                    Mus musculus.
Clostridium tetani.
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                                                                          WO200065058-A1
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06-MAY-1999;
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                                                                                                             02-NOV-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention is concerned with methods of treating asthma, ecsinophilia, allergic trhintis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosimophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                  Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                               Modified murine interleukin-5 SEQ ID NO: 54.
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                                                                                       AAB45527 standard; protein; 122 AA.
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99US-0132811P.
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32 QYIKANSKFIGITEL
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Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                      Clostridium tetani.
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                                                                                                                                                                                                                                                                                        Mus musculus
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Length 122; 0; Indels cancer

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it is possible that they may be used in the treatment helminthic infections
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Best Local Similarity 100.
Matches 15; Conservative
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Best Local Similarity 100.
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                                                                                                                                                                                                                                                                                                                                                Mus musculus.
Clostridium tetani.
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                                      Sequence 124 AA;
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                                   Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                             The present invention is concerned with methods of treating asthma, eosinophilia, allergic thinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce cosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
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                                                                                      Example 4; Page 131; 172pp; English
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                                                                                                                                                                                                                                                                                                                        94 QYIKANSKFIGITEL 98
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                                                                                                                                                                                                                                                                                15; Conservative
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N-PSDB; AAC68872.
           WPI; 2000-672791/65.
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                                                                                                                                                                                                                              Sequence 122 AA;
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06-MAY-1999;
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Length 124;
                                                                   Indels
                                                                          ö
Score 74; DB 3; I
Pred. No. 9.5e-06;
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                                                                   Mismatches
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                             19-APR-2000; 2000WO-DK000205
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                                                                                                                                                                                                                                                               Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                                       Modified human interleukin-5 SEQ ID NO: 4.
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                        AAB45492 standard; protein; 124
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Best Local Similarity 100.
Matches 15; Conservative
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Clostridium tetani.
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06-MAY-1999;
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                                                                                    AAB45492;
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AAB45492
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                    The present invention is concerned with methods of treating asthma, eosinophila, allergic trhintis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
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amelioration of asthma or other chronic allergic conditions
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100.0%; Pred. No. 9.5e-06;
ive 0; Mismatches 0;
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                                    Example 4; Page 129; 172pp; English
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                                                                                                                                                                                                     helminthic infections
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Matches 15; Conserv
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Clostridium tetani
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100.0%; Score 74; DB 3; Length 124;

Query Match

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                                                                                                                                                                                                                                                                                                                                                                                                                       Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia, vaccine, allergic rhinitis.
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Mismatches
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                                                                                                                                                                                                                        AAB45517 standard; protein; 124 AA.
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99US-0132811P.
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helminthic infections
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Clostridium tetani.
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                                                                                                                                                                               The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
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eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 74; DB 3; Length 126; 100.0%; Pred. No. 9.7e-06; ive 0; Mismatches 0; Indels
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99US-0132811P
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99US-0132811P
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                                      BIOTECH
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Clostridium tetani
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                                    (MEBI-) M & E
06-MAY-1999;
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06-MAY-1999;
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cancer;
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                  Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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              Modified human interleukin-5 SEQ ID NO: 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; Page 119; 172pp; English.
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                                                                                                                                                                                                                                                                                 99DK-00000552.
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                                                                                                                                                                                                                                                                                                                                              (MEBI-) M & E BIOTECH AS
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                                                                                                              Homo sapiens.
Clostridium tetani.
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les 15; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 126 AA;
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06-MAY-1999;
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AAB45494;

RESULT 147

AAB45494

Query Match

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru, haemodialyais-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amyloid beta tetanus toxoid/HA/CS fusion protein, SEQ ID NO:25.
                                                                                                                                                                                       100.0%; Score 74; DB 3; Length 126; 100.0%; Pred. No. 9.7e-06;
                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                           Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                        AAB49089 standard; protein; 136 AA.
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                                                                                                                                                                                                                                                             1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                           15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Influenza virus.
Plasmodium falciparum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium tetani.
                                                                                                                                                                                                        Local Similarity
                                                                                                                                                   Sequence 126 AA;
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four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The prognosis of improved status with respect to the disorder. The vide variety of disorders characterised by amyloid fibril deposition in a patient. Such disorders include Alzheimer's disease characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril depositis; type 2 diabetes characterised by islet amyloid protein peptide (IAPP, amylin) fibrils; reactive systemic amyloidosis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by AA fibrils derived from serum amyloid a protein (ApoSSA); systemic senile amyloidosis and familial amyloid cardiomyopathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform candiomyopathy characterised by prion protein deposits; and beta-2-microglobulin deposits which form as a result of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein comprising an amyloid beta composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-2003 to standardise OS field)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         compound for prevention and treatment of allergies comprises at least allergen antigenic determinant recognized by a B cell and at least antigenic determinant which does not trigger T cell activation.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tetanus toxoid T cell epitopes and Der pII B cell epitopes peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 136;
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100.0%; Pred. No. 1.1e-05;
tive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dermatophagoides pteronyssinus.
Clostridium tetani.
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nes 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 136 AA;
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Matches
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treatment of allergy. The compound comprises at least one allergen antigenic determinant (i) recognised by a B cell or an antibody secreted by a B cell of a non-atopic individual and at least one antigenic determinant (ii) different from the allergen that triggers T cell activation. (I) has antiallergic, antiasthmatic. antiinflammatory. Carmarological and immunosuppressive activities, and can be used in a paramaceutical or cosmetic medicament to treat and/or prevent allergies or a disease of allergic origin, bronchial asthma, atopic dermaties. These include rhinitis, sinusitis, bronchial asthma, atopic dermaties, some forms of acute and chronic urticaria, gastro-intestinal syndromes associated with the ingestion of food allergens, oro-pharyngeal syndrome, anaphylactic reactions associated with drug hypersensitivities and/or a mixture of these. The use of (I) in the treatment of allergic conditions avoids the need for drug treatment, which often causes undesirable side-effects. Also, prior art drug therapies alleviate symptoms, but do not influence their causes, however (I) actually combats the cause of an allergic reaction. The present sequence represents in appecifically claimed compound peptide
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                                                                                                                                                                                                                                                                                                                                    sequence from the present invention
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99US-0132811P.
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Best Local Similarity 100.0
....hes 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                       Sequence 137 AA;
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using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
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                                                                                                                                                                                                                                                                                                                                                                                                 Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                100.0%; Score 74; DB 3; Length 139; 100.0%; Pred. No. 1.1e-05;
                                                                                                                             Indels
                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                  Modified human interleukin-5 SEQ ID NO: 11.
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                                                                                                                                                                                                                                                                        AAB45499 standard; protein; 141 AA.
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99US-0132811P.
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                                                                                                                                                            1 QYIKANSKFIGITEL 15
                                                                                                                                                                                           84 OYIKANSKFIGITEL 98
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                                                                                                                               15; Conservative
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helminthic infections
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                                                                                                                  Best Local Similarity
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                                                                  Sequence 139 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Klysner S;
                                                                                                                                                                                                                                                                                                       AAB45499;
                                                                                                Query Match
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Matches
                                                                                                                                Matches
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RESULT 153

The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) proteins and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity an thus reduce eosinophil numbers. The allergic diseases may be treated

Example 10; Page 137; 172pp; English.

AAB45530

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                    The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhimitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue; vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis; cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 3; Length 147; 100.0%; Pred. No. 1.1e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                      Example 12; Page 153; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Elsner H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW81331 standard; protein; 158 AA.
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                                                                                                         99DK-00000552.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TNF2-7, a TNF-alpha analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97DK-00000418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-0044187P.
                                                                        2000WO-DK000205
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15; Conservative
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                                                                                                                                                              (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                       WPI; 2000-672791/65.
N-PSDB; AAC68875.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 147 AA;
WO200065058-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                      19-APR-2000;
                                                                                                         23-APR-1999;
06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .5-APR-1998;
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                            02-NOV-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-OCT-1998.
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                                                                                                                                                                                                     Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW81331;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                             Asthma, IL-5; interleukin-5; allergy, cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 3; Length 145; 100.0%; Pred. No. 1.1e-05; ive 0; Mismatches 0; Indels
                                                                                                                          Modified murine interleukin-5 SEQ ID NO: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified human interleukin-5 SEQ ID NO: 44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 12; Page 166-167; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB45522 standard; protein; 147 AA.
                 AAB45530 standard; protein; 145 AA
                                                                                                                                                                                                                                                                                                                                                 19-APR-2000; 2000WO-DK000205
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                                                                                        (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 100.
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           (MEBI-) M & B BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 helminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-672791/65.
                                                                                                                                                                                                                                       Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
Clostridium tetani.
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                                                                                                                                                                                                                    Mus musculus.
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                                                   AAB45530;
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AAB45522

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Claim 14; Page 67-68; 134pp; English.
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                                                                                                                                                                      alpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting alpha analogues are used as vaccines for treatment or prevention of diseases associated with excessive act activity of TNF-alpha, e.g. rheumatoid arthritis, Crohn's disease, ulcerative collitis, cancer of any soft, disseminated sclerosis, diabetes, psoriasis, osteoporosis and
                                                Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                                         The present sequence represents a modified human tumour necrosis factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue;
vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis;
cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 74; DB 2; Length 158; 100.0%; Pred. No. 1.2e-05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Elsner H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW81328 standard; protein; 158 AA.
                                                                                                                    Claim 13; Page 73; 134pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNF2-3, a TNF-alpha analogue.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-APR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.'
Matches 15; Conservative
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                N-PSDB; AAV68420
                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW81328;
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The present sequence represents a modified human tunmour necrosis factoralpha (Thr-alpha) analogue. The analogues have no residual Thr activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The Thr-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human Thr alpha, has at least one fragment of Thr substituted by a peptide containing an immunodominant T-cell epitope, and at least one Thr-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The Thrapha analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of TNR-alpha, e.g. rheumatcold arthritis, Crohn's disease, ulcerative colitis, cancer of any solitic disseminated sclerosis, diabetes, psoriasis, osteoporosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence represents a modified human tumour necrosis factoralpha (TNF-alpha) analoque. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Modified human tumour necrosis factor-alpha - comprises immunodominant cell epitope, useful in vaccines to treat or prevent TNF-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vaccine, rheumatoid arthritis, crohn's disease, ulcerative colitis, cancer, disseminated sclerosis, diabetes, psoriasis, osteoporosis; asthma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human tumour necrosis factor-alpha; INF-alpha; INF-alpha analogue;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 74; DB 2; Length 158; Best Local Similarity 100.0%; Pred. No. 1.2e-05; Matches 15; Conservative 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW81329 standard; protein; 158 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TNF2-4, a TNF-alpha analogue.
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97US-0044187P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66 QYIKANSKFIGITEL 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases, e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1998-594561/50.
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                                                                                                                                                                                                                                                                                                                                                                    Sequence 158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9846642-A1
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                                                                                                                                                                                                                                                                                                                          asthma
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using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of TNF-alpha, e.g. rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any soft.
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Sequence 158 AA;

Gaps ö 100.0%; Score 74; DB 2; Length 158; 100.0%; Pred. No. 1.2e-05; ive 0; Mismatches 0; Indels Conservative Local Similarity les 15; Conser Query Match Best Loc Matches ò

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115 OYIKANSKFIGITEL 129 1 OYIKANSKFIGITEL 15 g

RESULT 158 AAW81330

AAW81330 standard; protein; 158 AA.

AAW81330;

(first entry) 21-APR-1999 TNF2-5, a TNF-alpha analogue.

Human tumour necrosis factor-alpha, TNF-alpha, TNF-alpha analogue, vaccine, rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer, disseminated sclerosis, diabetes, psoriasis, osteoporosis; asthma.

Synthetic

Homo sapiens.

WO9846642-A1

22-OCT-1998

98WO-DK000157 15-APR-1998;

97DK-00000418. 97US-0044187P. 15-APR-1997; 24-APR-1997;

(FERR) FARM LAB FERRING AS

Dalum I; Elsner H, Mouritsen S, Jensen MR,

WPI; 1998-594561/50. N-PSDB; AAV68419.

Modified human tumour necrosis factor-alpha - comprises immunodominant cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.

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Claim 12; Page 71; 134pp; English.

The present sequence represents a modified human tumour necrosis factoralpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The INF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting

ô e.g. any loops or any of the B', I or D strands in the back beta-sheet. The TN alpha analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of TNF-alpha, rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of sort, disseminated sclerosis, diabetes, psoriasis, osteoporosis and Gaps ö Length 158; ż AAW81327 standard; protein; 158 Conservative Query Match Best Local Similarity Loca 15; Conserve (first Sequence 158 AA; 21-APR-1999 AAW81327; asthma RESULT 159 AAW81327 888888888 셤

Human tumour necrosis factor-alpha; TNP-alpha; TNF-alpha analogue; vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis; cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis; 98WO-DK000157. 97DK-00000418. 97US-0044187P. Homo sapiens. 15-APR-1998; WO9846642-A1 .5-APR-1997; 24-APR-1997; 22-OCT-1998 Synthetic asthma.

TNF2-1, a TNF-alpha analogue.

Jensen MR, Mouritsen S, Elsner H, WPI; 1998-594561/50. N-PSDB; AAV68416

LAB FERRING AS

(FERR) FARM

Dalum I;

Modified human tumour necrosis factor-alpha - comprises immunodominant τ cell epitope, useful in vaccines to treat or prevent τNF -associated diseases, e.g. cancer.

Example 1; Page 65-66; 134pp; English.

The present sequence represents a modified human tumour necrosis factoralpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of alpha analogues are used as vaccines for treatment or prevention of cheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any sort, disseminated sclerosis, diabetes, psoriasis, osteoporosis and

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The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition compisies at least one modified immunogenic self-protein accomposition compisies at least one modified immunogenic self-protein modified INF-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachexia, wultiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as INF (tumour necrosis factor)-alpha in a human subject. (I) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human for immander manny.
                                                                                                                                                                                                                                                                                                                                                                   TNF-alpha, pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antiinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel vaccine composition for prevention/treatment of self-protein-
mediated pathology such as cancer, diabetes and asthma, comprises
modified immunogenic self-protein and surfactant capable of acting a
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                                            Length 158;
                                                                            Indels
                                       100.0%; Score 74; DB 2; I 100.0%; Pred. No. 1.2e-05;
                                                                            Mismatches
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                                                                                                                                                                                                                               ABB07277 standard; protein; 158 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 21; Page 39; 55pp; English.
                                                                                                                                                                                                                                                                                                                                     Human TNF-alpha analogue TNF2-7.
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                                                                                                             1 OYIKANSKFIGITEL 15
                                                                                                                                             11 QYIKANSKFIGITEL 25
                                                                                                                                                                                                                                                                                                     (first entry)
                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Balchen T,
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                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (FERR ) FERRING BV.
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Sequence 158 AA;
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Local Sim
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                                       Query Match
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                                                                           Matches
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The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunoganic self-protein self-protein as a solubilizer. (1) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colitis or crohn's arthritis, an inflammatory bowel disease, postias or self-protein such as the function of the colitis or crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (1) is useful for inducing autoantibodies to a self-protein such as TMF (tumour necrosis factor) -alpha in a human subject. (1) comprising cetylpyridinium choride as a component is useful for immunisation of a human subject or for treatment of a human subject or inflammatory disease. The present sequence represents a human TMF-alpha
                                                                                                                                                                                                                                                                                INF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; ectylpyridinium chloride; immunisation; antiinflammacroy; antirheumatic; antiarthritic; antiinCer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel vaccine composition for prevention/treatment of self-protein-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 21; Page 46-47; 55pp; English.
                                                                                                                              ABB07281 standard; protein; 158 AA.
                                                                                                                                                                                                                                             Human TNF-alpha analogue TNF2-4.
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                 |||||||||||||||||||||||||||||QYIKANSKFIGITEL 91
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100.0%; Score 74; DB 5; Length 158; 100.0%; Pred. No. 1.2e-05;
                     Indels
                      Mismatches
  100.0%; ...
0;
                                                             115 QYIKANSKFIGITEL 129
                                            1 OYIKANSKFIGITEL 15
         Best Local Similarity 100.
Matches 15, Conservative
Query Match
                                                                                                      RESULT 162
ABB07276
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Gaps

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Indels

Length 158;

100.0%; Score 74; DB 5; I ilarity 100.0%; Pred. No. 1.2e-05; Conservative 0; Mismatches 0;

Query Match Best Local Similarity Matches 15; Conserv

Sequence 158 AA; analogue TNF2-4

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TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human; TNF2-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention provides a pharmaceutical vaccine composition (I) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein (selected from modified TNR-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colltis or crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as TNF (tumour necrosis factor) -alpha in a human subject. (I) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human inflammatory disease. The present sequence represents a human TNF-alpha
                        pharmaceutical; vaccine; self-protein; tumour necrosis factor;
                                         cetylpyridinium chloride; immunisation; antilnflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel vaccine composition for prevention/treatment of self-protein-
mediated pathology such as cancer, diabetes and asthma, comprises
modified immunogenic self-protein and surfactant capable of acting as
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100.0%; Pred. No. 1.2e-05;
ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bouman MHEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 21; Page 35-36; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABB07280 standard; protein; 158 AA.
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                                                                                                                                                                                                                                                                                                             20-JUN-2001; 2001WO-DK000431.
                                                                                                                                                                                                                                                                                                                                                         21-JUN-2000; 2000DK-0000966
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Best Local Similarity 100.
Matches 15; Conservative
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N-PSDB; ABA94385.
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                                                                                                                                                                     Homo sapiens.
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                           INF-alpha;
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                                                                                                                                                                                 TNF-alpha, pharmaceutical, vaccine, self-protein, tumour necrosis factor, cetylpyridinium chloride, immunisation, antinflammatory, antirheumatic, antiarthritic, antiulcer, cytostatic, antidiabetic, antipsoriatic, antiasthmatic, immunomodulator, neuroprotective, osteopathic, human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as solubilizer.
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100.0%; Pred. No. 1.2e-05;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bouman MHEM;
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                                                                                                                                     Human TNF-alpha analogue TNF2-3.
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ABB07276 standard; protein; 158
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-JUN-2001; 2001WO-DK000431
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                                                                                           26-MAR-2002 (first entry)
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Balchen T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-114542/15.
N-PSDB; ABA94386.
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                                                                                                                                                                                                                                                                                                                                                                                WO200197837-A1.
                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
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Homo sapiens.

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The present sequence is that of AutoVac construct GDF-8 ext, which consists of the C-terminal 160 amino acids of human growth differentiation factors 8 (GDF-8, see AAR72013) with residues 16-36 substituted by the promiscuous tetanus toxin T-cell epitope P30 (see AAB20144) and residues 37-51 substituted by tetanus toxin T-cell epitope CC AAB20144) and residues 37-51 substituted by tetanus toxin T-cell epitope CC AAB20144). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is cuthentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA encoding osteoprotegerin ligand/tetanus toxoid P30 epitope fusion.
                                                               52. 160
/note= "identical to residues 267-375 of human GDF-8"
                                                                                                                                     to avoid
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                                                                                                                            /note= "Cys-124 may be substituted by Ser disulfide bond formation"
141. .142
/note= "optionally replaced by Glu-Gly"
/note= "tetanus toxoid P30 epitope"
                .51
te= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; Page 107-108; 110pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY84425 standard; protein; 173 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; #--
                                                                                                                                                                                                                                                                                                                                                                                99DK-00001014.
99US-0145275P.
                                                                                                                                                                                                                                                                                                                                   20-JUL-2000; 2000WO-DK000413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Halkier T, Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (MEBI-) M & B BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37 QYIKANSKFIGITEL
                                     /note=
52. 16/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-112680/12.
                                                                                                         Misc-difference 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 160 AA;
                                                                                                                                                                           Misc-difference
                                                                                                                                                                                                                                               WO200105820-A2.
                                                                                                                                                                                                                                                                                                                                                                           20-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                       26-JUL-1999;
                                                                                                                                                                                                                                                                                         25-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY84425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      failure
                       Region
                                                                 Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY84425
ID AAY8
XX
AC AAY8
XX
DT 25-J
XX
DE DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein (selected from modified TNR-lapha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colitis or crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (I) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human for immunisation of a human subject or treatment of a human inflammatory disease. The present sequence represents a human TNF-alpha

    15 .15 /note= "identical to residues 215-230 of human GDF-8"
    16 .36

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                         Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Growth differentiation factor 8 AutoVac construct GDF-8 ext.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 5; Length 15r
100.0%; Pred. No. 1.2e-05;
                                                                                                                                                                                                                                                               Bouman MHEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 21; Page 44-45; 55pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB20153 standard; protein; 160 AA.
                                                                                                                       20-JUN-2001; 2001WO-DK000431.
                                                                                                                                                                    21-JUN-2000; 2000DK-0000966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 OYIKANSKFIGITEL 15
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Best Local Similarity 100.
                                                                                                                                                                                                                                                             Olesen OF, Balchen T,
                                                                                                                                                                                                                                                                                                          WPI; 2002-114542/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
Clostridium tetani.
Synthetic.
                                                                                                                                                                                                                (FERR ) FERRING BV.
                                                                                                                                                                                                                                                                                                                               N-PSDB; ABA94390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 158 AA;
                                   WO200197837-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                analogue TNF2-1
                                                                                                                                                                                                                                                                                                                                                                                                                                           solubilizer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB20153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Region
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Gaps

Osteoprotegerin ligand; OPGL; osteoprotegerin; osteoclastogenesis; tumour mecrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption; ss.

15. .112 /note= "residues 158-255 of murine OPGL"

.127

Peptide Protein

Protein

Location/Qualifiers /note= "His tag"

Synthetic. Clostridium tetani.

Mus musculus

Peptide

Key

note= "residues 262-316 of murine OPGL" /note= "tetanus toxoid P2 epitope" 128. .182

WO200015807-A1

99WO-DK000481 98DK-00001164

13-SEP-1999; 15-SEP-1998; 02-OCT-1998;

23-MAR-2000

(MEBI-) M & E BIOTECH AS.

Halkier T, Haaning J; WPI; 2000-271444/23. N-PSDB; AAZ99971.

An osteoprotegerin ligand/tetanus toxoid P30 epitope fusion.

(first entry)

25-JUL-2000

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The present sequence represents fusion protein of murine osteoprotegerin ig a secreted member of the tumour necrosis factor receptor family, which blocks osteoclast ogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II transmembrane protein. The murine and human OPGL protein is synthesised as a type II transmembrane protein. The murine and human OPGL colypeptides are 87% homologous. OPGL is a potent osteoclast the collision factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also an activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL activity in an animal. The method comprises using at least one OPGL polypeptide or subsequence, and/or at method and OPGL polypeptide are useful for treating, preventing and ameliorating osteoporosis or other diseases or conditions characterised by excessive bone resorption
             Osteoprotegerin ligand; OPGL; osteoprotegerin; osteoclastogenesis; umour necrosis actor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.
                                                                                                                                                                                                                                          145. .159
/note= "tetanus toxoid P2 epitope"
160. .173
/note= "residues 303-316 of murine OPGL"
                                                                                                                                                                                                                              /note= "residues 158-287 of murine OPGL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example; Page 99-100; 110pp; English.
                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                l. .14
/note= "His tag"
                                                                                                                                                                                                                                                                                                                                                                                                                                98DK-00001164.
98US-0102896P.
                                                                                                                                                                                                                                                                                                                                                                                                  99WO-DK000481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Haaning J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-271444/23.
N-PSDB; AAZ99972.
                                                                                               Synthetic.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 173 AA;
                                                                                                                                                                                                                                                                                                                                 WO200015807-A1
                                                                                                                               Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                  13-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                  15-SEP-1998;
02-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                  23-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Halkier T,
                                                                                                                                                              Key
Peptide
                                                                                                                                                                                                               Protein
                                                                                                                                                                                                                                                Peptide
                                                                                                                                                                                                                                                                                Protein
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Example; Page 97-98; 110pp; English.
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; 0 Length 173; Indels 100.0%; Score 74; DB 3; L ilarity 100.0%; Pred. No. 1.4e-05; Conservative 0; Mismatches 0; Query Match Best Local Similarity Matches 15; Conserv

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Gaps

12 1 OYIKANSKFIGITEL

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AAY84424 standard; protein; 182 AA. AAY84424; RESULT 167 ex 2

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The present sequence encodes a fusion protein of murine osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II transmembrane protein. The murine and human OPGL colypeptides are 87% homologous. OPGL is a potent osteoclast. Cifferentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also a activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL activity in an animal. The method comprises using at least one OPGL polypeptide or subsequence, and/or at method and OPGL polypeptide are useful for treating, preventing and amethod candiorating osteoprosis or other diseases or conditions characterised by excessive bone resorption
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 3; Length 182; 100.0%; Pred. No. 1.4e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                113 QYIKANSKFIGITEL 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 182 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
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In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.

RESULT 168

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Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; mutein; variant; tetanus toxoid; epitope.
                                                                      Human TNFalpha variant, TNF34-P2-P30.
         AAO30488 standard; protein; 194 AA.
                                                                                                                                                                                                                                                                                                                         .5-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                            16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                     KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                           PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-449558/42.
                                                                                                                                                                                                                                                                                                                                                                                                                            MOURITSEN S
                                                                                                                                                                                                                                                                                                                                                                                                         BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                                                WO2003042244-A2.
                                                                                                                                   Homo sapiens
Unidentified
                                                  22-SEP-2003
                                                                                                                                                                                                                                                                                                     22-MAY-2003.
                              AAO30488;
                                                                                                                                                       Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                              (NIEL/)
(BRAT/)
(VOLD/)
(MOUR/)
                                                                                                                                                                                                                                                                                                                                                                          (PHAR-)
                                                                                                                                                                            Key
Region
                                                                                                                                                                                                                                                                                                                                                                                     KLYS/)
                                                                                                                                                                                                          Region
                                                                                                                                                                                                                               Region
                                                                                                                                                                                                                                                  Region
AA030488
          The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNF, TNFalbha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with an inserted tecanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                   Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease;
tumour necrosis factor alpha; gene therapy; arthritis; human; mutant;
mutein; variant; tetanus toxoid; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 74; DB 6; Length 194; 100.0%; Pred. No. 1.6e-05; rive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                               Mouritsen
                                                                                                                                                                                          /note= "Human TNP"
110. .130
/note= "Tetanus toxoid P30 epitope"
131. .145
/note= "Tetanus toxoid P2 epitope"
146. .194
/note= "Human TNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                              Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 23; Page 159-160; 196pp; English.
                                                                  Human TNFalpha variant, TNF34-P30-P2.
                                                                                                                                                                        Location/Qualifiers
   AAO30489 standard; protein; 194 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Bratt T,
                                                                                                                                                                                                                                                                                                                                      16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                    15-NOV-2002; 2002WO-DK000764
                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                 KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                       PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-449558/42.
                                                                                                                                                                                                                                                                                                                                                                                                   BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                         MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 194 AA;
                                                                                                                                                                                                                                                                            WO2003042244-A2
                                                                                                                              Homo sapiens.
Unidentified.
Chimeric.
                                             22-SEP-2003
                                                                                                                                                                                                                                                                                                22-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                             Klysner S,
                          AAO30489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                               (KLYS/)
(NIEL/)
(BRAT/)
(VOLD/)
(MOUR/)
                                                                                                                                                                                                                                                                                                                                                                       (PHAR-)
                                                                                                                                                                       Key
Region
                                                                                                                                                                                                      Region
                                                                                                                                                                                                                         Region
                                                                                                                                                                                                                                             Region
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1125. .145 | 125. .145 | Incte= "Tetanus toxoid P30 epitope" | 146. .194 .124 = "Tetanus toxoid P2 epitope"

ocation/Qualifiers

.109

"Human TNF"

/note=

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                                                                                                                                              The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (ILS) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with an inserted tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 6; L
100.0%; Pred. No. 1.6e-05;
ive 0; Mismatches 0;
                                                                                             Claim 23; Page 158; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 110 QYIKANSKFIGITEL 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 100.
les 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 194 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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Mouritsen S;

Voldborg B,

Bratt T,

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Gaps

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145

131 ÓYİKANSKFIGITEL

RESULT 169

1 QYIKANSKFIGITEL 15

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Conservative

Best Local Similarity Matches 15; Conserv

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This is an immunogenized MUC-1 analogue containing foreign epitopes P2 and P30. Immunogenic analogues of MUC-1 and, e.g. human prostate specific and P30. Immunogenic analogues of MUC-1 and, e.g. human prostate specific centembrane antigen (hPSM) can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms (see features table). 10 regions suitable for the insertion of foreign T helper epitopes were identified. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. hPSM, heregulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the Ccll-associated PA; and (2) at least 1 first T helper cell group which is human/murine FGF8b comprising a substantial part of all known and coreign to the animal. Analogues of human PSM, human Herz and predicted CTL and B-cell epitopes of the respective PA and including at predicted CTL and B-cell epitopes of the respective PA and including at the respective PA and including at the specification. It was made using the mucin repeat sequence to the substantian, which appear on pages 220, 213 and 21 and 21 and 21 and 220, which appear on pages 220, 213 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mouritsen S, Nielsen KG, Haaning J, Leach D, Dalum I;
                                                                                                                                                                          Mucin repeat; MUC-1 analogue; vaccination; self-protein; cancer; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.0%; Pred. No. 1.7e-05;
Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                       MUC-1 analogue containing foreign epitopes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (AAY92664), P2 and P30 (AAY92625-26), v
214 respectively, of the specification
                                                                                                                                                                                                                                                                                              Location/Qualifiers
61. .75
/label= P2
136. .156
/label= P30
/note= "q"
                  AAY92665 standard; peptide; 216 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Birk P, Karlsson G;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-DK000525.
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98US-0105011P
                                                                                               10-AUG-2000 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-349917/30.
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20-OCT-1998;
                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Steinaa L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gautam A,
                                                            AAY92665;
                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                          Peptide
AAY92665
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The present sequence is that of AutoVac construct GDF-8 dimer comprising 2 copies of the 109-amino acid C-terminal region of human growth differentiation factor 8 (GDF-8, see AAF20141) convalently connected through the P2 and 80 T-cell epitopes (see AAB20143-44) of tetanus toxin. It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                    Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Region 146. .254
/note= "109 C-terminal residues of human GDF-8"
Misc-difference 235. .236
                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "109 C-terminal residues of human GDF-8"
                                                                                                                                                                                                                       Growth differentiation factor 8 AutoVac construct GDF-8 dimer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  90. .91
/note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 110. .124
/note= "tetanus toxoid P2 epitope"
125. .145
/note= "tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Page 105-106; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Halkier T, Mouritsen S, Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                          AAB20152 standard; protein; 254 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JUL-2000; 2000WO-DK000413
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99US-0145275P
1 OYIKANSKFIGITEL 15
                                           75
                                                                                                                                                                                           (first entry)
                                 61 QYIKANSKFIGITEL
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Clostridium tetani.
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26-JUL-1999;
                                                                                                                                                                                         30-APR-2001
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                                                                                                                                                                                                                                                                                                                                                      Synthetic.
Chimeric.
                                                                                                                                                           AAB20152;
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                                                                                                             AAB20152
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Gaps

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2 human interleukin 5 (IL5) monomers joined by tetanus toxoid P30 and P2. This sequence is used to illustrate the method of
                                                     Query Match
Best Local Similarity
Local 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-449558/42.
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VOLDBORG B.
                                             Sequence 285 AA;
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                                                                                                                                                                                                                                                                                                          Homo sapiens.
Unidentified.
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                          invention
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(KLYS/) I
(NIEL/) P
(BRAT/) I
(VOLD/)
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                                                                                                                                                                                                                                                                                                                                                             Peptide
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                                                                                                                                                                                                                                                                                 Multimeric protein; interleukin 5; IL5; TWFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF® vaccines can be used to treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart failure
                                                                                                         Gaps
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                                                                                    Length 254;
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/note= "Human IL5 leader peptide"
                                                                                  100.0%; Score 74; DB 4; I 100.0%; Pred. No. 2.1e-05;
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:e= "Mature hIL5.34 protein"
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                                                                                                       Mismatches
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16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-NOV-2002; 2002WO-DK000764
                                                                                                                          1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                           (first entry)
                                                                            Query Match
Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                             /note=
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KLYSNER S.
NIELSEN F S.
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VOLDBORG B.
MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-449558/42.
                                                             Sequence 254 AA;
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                                                                                                                                                                                                                                                                                                                          Homo sapiens.
Unidentified.
Chimeric.
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Peptide
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(KLYS/)
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(BRAT/)
(VOLD/)
(MOUR/)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
epitopes
the
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                                                                                                                                                                                            Length 285;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hIL5-P2-P30-hIL5 (hIL5.35) fusion construct protein.
                                                                                                                                                                                     100.0%; Score 74; DB 6; I
100.0%; Pred. No. 2.4e-05;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "Human IL5 leader peptide"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAO30458 standard; protein; 285 AA.
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                                                                                                                                                                                                                                                                                                                                                      156 QYIKANSKFIGITEL 170
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16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                              1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                     Conservative
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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (115) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition
comprises 2 human interleukin 5 (ILS) monomers joined by diglycine linker and including terminally positioned tetanus toxoid epitopes P30 and P2. This, sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric; variant; mutant; mutein.
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composition for treating inflammatory diseases e.g. arthritis.
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                                                                                                                                                   Length 287;
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                                                                                                                                                                                                       0; Indels
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/note= "Human ILS leader peptide"
                                                                                                                                                      100.0%; Score 74; DB 6; I
100.0%; Pred. No. 2.4e-05;
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16-NOV-2001; 2001US-0331575P.
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                                                                                                                                                                                                                                                                                    273 QYIKANSKFIGITEL 287
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                                                                                                                                                                          1 Similarity 100.
                                                                                                                                                                                                                                                        OYIKANSKFIGITEL
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(KLYS/) KLYSNER S.
(NIEL/) NIELSEN F S.
(BRAT/) BRATT T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BRAT/) BRATT T.
(VOLD/) VOLDBORG B.
(MOUR/) MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-449558/42.
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                                                                                                       Sequence 287 AA;
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Unidentified.
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                                                                                                                                                      Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ស្តស្ត្រន្តន្ត
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric; variant; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                        Gaps
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                                                                                                    100.0%; Score 74; DB 6; Length 285; 100.0%; Pred. No. 2.4e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mouritsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note= "Human IL5 leader peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20. .287
/note= "Mature hIL5.36 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 20; Page 115-117; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                               AAO30459 standard; protein; 287 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-NOV-2002; 2002WO-DK000764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                 1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-SEP-2003 (first entry)
                                                                                                                            Local Similarity 100.
Les 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hIL5.36 variant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VOLDBORG B.
MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2003-449558/42.
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                                                      Sequence 285 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
Unidentified.
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       invention
                                                                                                                                                                                                                                                                                                                                                                                                                                AA030459;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (KLYS/) (NIEL/) (BRAT/) (VOLD/) (MOUR/
                                                                                                       Query Match
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                                                                                                                                                                                                                                                                                                                                RESULT 174
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Location/Qualifiers
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/note= "Human TNF"
159. .161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Human TNF"
                                                                                                                                                                                                                                                                          192 QYIKANSKFIGITEL 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-NOV-2001; 2001DK-00001702
                                                                                                                                                                                                                                                            1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
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/note= "Hu
                                                                                                                                                                                                  Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= '
162. .16
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                                                                                                                                                                              Sequence 350 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003042244-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unidentîfied.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                             AA030491;
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                                                                                                                                                                                                                                                                                                                            RESULT 177
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for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct variant which comprises 2 human interleukin 5 (ILS) monomers joined by diglygine linker and including terminally positioned tetanus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel recombinant protein as vaccine for treating malarial infection comprises antigenic peptides obtained from different stages of plasmodium falciparum life cycle.
                                                                                                                                                                                                                                                                                                                                                                        Recombinant protein; CDC/NIIMALVAC-1; multivalent; malaria; vaccine; real-pylicope; treanue toxoid; antigent epitope; treatment; circumaporozoite protein; GSP; sporozoite surface protein-2; SSP-2; liver stage antigen-1; LSA-1; merozoite surface protein-1; MSP-1; MSP-2; applical membrane antigen-1; AMA-1; erythrocyte binding antigen-175; EBA-175; rhoptry associated protein-1; RAP-1; gamete specific antigen; Pfg27, antiparasitic; prevention; anti-CDC/NIIMALVAC-1 antibody;
                                                                                                                                       Gaps
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    350
    Jabel= Mature CDC/NIIMALVAC-1
    /note= "Recombinant multivalent malarial vaccine"

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0
                                                                                                         100.0%; Score 74; DB 6; Length 287; 100.0%; Pred. No. 2.4e-05;
                                                                                                                                   0; Indels

    .22
    /label= Melittin signal peptide
/note= "Derived from Honey bee"

                                                                                                                                   Mismatches
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(USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                Recombinant vaccine CDC/NIIMALVAC-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                      AAY70278 standard; protein; 350 AA
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                                                                                                                                                            1 OYIKANSKFIGITEL 15
                                                                                                                                                                             24 QYIKANSKFIGITEL 38
                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                     Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                           (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Apis; sp.
Clostridium tetani.
Plasmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-237654/20.
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                                                                                Seguence 287 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-AUG-1999;
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                                                                                                                                                                                                                                                                                                        12-SEP-2003
06-JUN-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfg27; ant
honey bee.
                                                                                                                                                                                                                                                                               AAY70278;
                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lal AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
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which is a multivalent, multistage malarial vaccine. The recombinant protein comprises, melitiin signal peptide, (His)6 tag, T-cell epitope from tetamus toxoid and 21 antigenic epitopes from circumsporosite protein (CSP), sporozaite surface protein-2 (SSP-2), liver stage antigen-1 (LSA-1), merozoite surface protein-1 (MSP-1), MSP-2, apical membrane antigen-1 (AMA-1), erythrocyte binding antigen-175 (EBA-175), rhoptry associated protein-1 (RAP-1) and gamete specific antigen, Pfg27. These epitopes were obtained at different stages of the life cycle of Plasmodium falciparum. CDC/NIIMALVAC-1 vaccine has antiparasitic activity and can used for treatment and prevention of malarial infections. Anti-CDC/NIIMALVAC-1 antibodies can be used for thetecting P. falciparum in biological samples. (Updated on 12-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Multimeric protein; interleukin 5; ILS; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                          100.0%; Score 74; DB 3; Length 350; 100.0%; Pred. No. 3e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .182
3= "Tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               343. .357
/note= "Tetanus toxoid P2 epitope"
358. .514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human TNFalpha variant (TNF_T2) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KLYSNER S.
NIELSEN F S.
BRATT T.
VOLDBORG B.
MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (PHAR-) F
(KLYS/) F
(NIEL/) F
(BRAT/) F
(VOLD/) (MOUR/) F
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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (115) and tumnour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                              New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 6; Length 514; 100.0%; Pred. No. 4.5e-05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       194. .514
/note= "Tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Tetanus toxoid P2 epitope"
                                                                                                                              Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159. .161
/note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .321
e= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                Claim 23; Page 163-166; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAO30495 standard; protein; 514 AA.
                                                                                                                                Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Human TNF"
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/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human TNFalpha variant, hTNFT_4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      162 QYIKANSKFIGITEL 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
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322. .336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .158
                                                                                                                                Klysner S, Nielsen FS,
             PHARMEXA AS.
KLYSNER S.
NIELSEN F S.
                                                            (BRAT/) BRATT T.
(VOLD/) VOLDBORG B.
(MOUR/) MOURITSEN S.
                                                                                                                                                             WPI; 2003-449558/42.
                                                                                                                                                                                N-PSDB; AAL61300
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 514 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
Unidentified.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAO30495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
               (PHAR-)
(KLYS/)
                                              (NIEL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
Region
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ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNPalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNRalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                           New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                  ö
               Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 6; Length 514; 100.0%; Pred. No. 4.5e-05;
                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      337. .357
/note= "Tetanus toxoid P30 epitope"
358. .514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Tetanus toxoid P2 epitope"
177. 333
/note= "Human TNF"
334. 336
             Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      159. .161
/note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human TNFalpha variant (TNF_T1) protein.
                                                                                                                                            Claim 23; Page 169-171; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAO30490 standard; protein; 514 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2. .158
/note= "Human TNF"
             Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                ٥;
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16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      343 QYIKANSKFIGITEL 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                 1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     176
                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 100.
1es 15; Conservative
             Nielsen FS,
                                             WPI; 2003-449558/42.
                                                              N-PSDB; AAL61301
                                                                                                                                                                                                                                                                                                                                Sequence 514 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2003042244-A2
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Unidentified.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-SEP-2003
             Klysner S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAO30490;
                                                                                                                                                                                                                                                                                                                                                                 Query Match
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Region
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Matches

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AAO30490

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (LL5) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 74; DB 6; Length 517; 100.0%; Pred. No. 4.5e-05; ive 0; Mismatches 0; Indels
                                                                                                  497. .517
/note= "Tetanus toxoid P2 epitope"
322. .336
/note= "Tetanus toxoid P2 epitope"
                                                                                  /note= "Tri-glycine linker"
497. .517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Truncated human CEA-TT P2 and P30 epitopes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .34
/note= "signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 23; Page 175-177; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                  /note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABR82481 standard; protein; 537 AA
                                                                                                                                                                                                                                                       16-NOV-2001; 2001DK-00001702.
                                                                                                                                                                                                                       15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        322 QYIKANSKFIGITEL 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 OYIKANSKFIGITEL 15
                                                                  .496
                                .493
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                            KLYSNER S.
NIELSEN F S.
BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                                                                                            (KLYS/) KLYSNER S.
(NIEL/) NIELSEN F S.
(BRAT) BRATT T.
(VOLD/) VOLDBORG B.
(MOUR/) MOURITSEN S.
                                                                                                                                                                                                                                                                                                           PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-449558/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAL61302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 517 AA;
                                                                                                                                                      WO2003042244-A2
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                                                                                                                                                                                     22-MAY-2003
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Peptide
                                                                                                                                                                                                                                                                                                           PHAR-)
 Region
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                                                                                                    Region
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셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TWF, TWPSIPha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TWFalpha variant protein. The variant comprises 3 hTWF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Multimeric protein; interleukin 5; ILS; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                      New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 6; Length 514; llarity 100.0%; Pred. No. 4.5e-05; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                       Mouritsen
                                                                                                                                                                                                                                                      Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Tri-glycine linker"
162. .318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  319. .321
/note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                          Claim 23; Page 191-193; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    162. .318
/note= "Human TNF"
319. .321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAO30492 standard; protein; 517 AA.
                                                                                                                                                                                                                                                      Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2. .158
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human TNFalpha variant protein #1.
                                           15-NOV-2002; 2002WO-DK000764.
                                                                           16-NOV-2001; 2001DK-00001702.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OYIKANSKFIGITEL 336
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .161
                                                                                                                                                                                                                                                  Nielsen FS,
                                                                                                                                            (KLYS/) KLYSNER S.
(NIEL/) NIELSEN F S.
(BRAT/) BRATT T.
(VOLD/) VOLDBORG B.
(MOUR/) MOURITSEN S.
                                                                                                                                               KLYSNER S.
NIELSEN F S.
                                                                                                                               PHARMEXA AS.
                                                                                                                                                                                                                                                                                      2003-449558/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                      N-PSDB; AAL61305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 514 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
Unidentified.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-SEP-2003
                                                                                                                                                                                                                                                      ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAO30492;
                                                                                                                                                                                                                                                    Clysner
                                                                                                                               PHAR-)
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Gaps

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Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                          Gene product comprises a tetanus toxin fragment, which may be expressed in a transformed host, and used as an antigen in vaccine production, against the disease. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                         its fragments contg.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY92627-49 are mutant immunogenized human prostate specific membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dalum I;
                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; PSM; prostate cancer; cell-associated peptide antigen; foreign epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mutant human PSM antigen splice variant construct, hPSM'10.3.
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                                                                                                                                                                                                                                                                                                100.0%; Score 74; DB 1; Length 573; 100.0%; Pred. No. 5.1e-05;
                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Leach
                                                                                                     Cloned DNA sequence coding for tetanus toxin - or it epitope used to express antigens for vaccine prodn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Haaning J,
                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      617. .631
/label= P2
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153. .173
/label= P30
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY92649 standard; protein; 693 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Steinaa I, Mouritsen e,
Gamtam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page; 220pp; English
                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                          Claim 4; Fig 1; 36pp; English.
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98US-0105011P.
                                                                                                                                                                                                                                                                                                                                                                                        OXIKANSKFIGITEL 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-DK000525
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MEBI-) M & B BIOTECH AS.
                                       WPI; 1987-015999/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-349917/30.
                                                                      N-PSDB; AAN70545
                                                                                                                                                                                                                                                               Sequence 573 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200020027-A2
                     Fairweathe NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY92649;
                                                                                                                                                                                                                                                                                                                                                                                                     88
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ID AAY9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCB) in the animal of at least 1 modified CEA polypeptide or of a mucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a truncated human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                             Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Portion of B fragment and all of the C fragment of tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 7; Length 537; 100.0%; Pred. No. 4.7e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 134-137; 140pp; English.
35. .537
/note= "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAP70345 standard; protein; 573 AA.
                                                                                                                     17-JAN-2003; 2003WO-DK000031
                                                                                                                                                      17-JAN-2002; 2002DK-00000082
17-JAN-2002; 2002US-0350047P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (revised)
(first entry)
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Best Local Similarity 100.'
Matches 15; Conservative
                                                                                                                                                                                                                                         Voldborg
                                                                                                                                                                                                                                                                            WPI; 2003-587260/55.
N-PSDB; ACF35968.
                                                                                                                                                                                                          (PHAR-) PHARMEXA AS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 537 AA;
                                                  WO2003059379-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in its sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-JUN-1986;
                                                                                                                                                                                                                                                                                                                                                                                     polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-MAR-2003
22-APR-1991
                                                                                   24-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TT; vaccine
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EP209281-A.
                                                                                                                                                                                                                                           Klysner S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAP70345;
 Protein
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cc antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autoractive to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing cf. preserved in the immunogenized forms. The method is used for inducing an immune responses against weakly immunogenic cell-associated peptide antigens (PAM) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or cell-associated specific membrane antigen (PSM), heregulin 2 (Herz) and/or cell-associated from the PA and/or at least 1 CTL (cytotoxic T-1ymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA, and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and cell epitopes of the respective PA and including at predicted CTL and B-cell epitopes of the respective PA and including at cleast one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; PSM; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mutant human PSM antigen splice variant construct, hPSM'6.3.
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Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 3; Length 693; 100.0%; Pred. No. 6.2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                153. .173
/label= P30
/note= "foreign epitope"
391. .405
/label= P2
/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92647 standard; protein; 693 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          617 QYIKANSKFIGITEL 631
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
les 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 693 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-OCT-1999;
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenized analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are continuogenized forms. The method is used for inducing immune responses against weakly immunogenize cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8D (FGF8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the saimals immune system of: (1) at least 1 CTL (cytocoxic T-1ymphocyte) crosup derived from the PA and/or at least 1 B-cell group which is coll-associated PA, and (2) at least 1 first T helper cell group which is contained animal. Analogues of the respective PA and including at the predicted CTL and B-cell epitopes of the respective PA and including at content prostate, prostate Apreas or breast cancer when the PA is human CC coll-associated, prostate/breast or breast cancer when the PA is human CC to treat prostate, prostate/breast or breast cancer when the PA is human CC from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                    Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 3; Length 693; 100.0%; Pred. No. 6.2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modified human CEA-TT P2 and P30 epitopes.

    .34
    /note= "signal peptide"
    .708
    /note= "mature protein"

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABR82479 standard; protein; 708 AA.
                                                                            Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            391 QYIKANSKFIGITEL 405
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17-JAN-2002; 2002US-0350047P.
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 693 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABR82479;
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ABR82479
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The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least 1 modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response or virus expressing the modified CEA polypeptide to induce a CTL response or virus expressing the modified CEA polypeptide to induce a CTL response or virus expressing the suggest the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a
                                                               Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 74; DB 7; Length 708; 100.0%; Pred. No. 6.4e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Modified human CEA-TT P2 and P30 epitopes.
                                                                                                                                                   Disclosure, Page 121-124; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "mature protein"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-JAN-2003; 2003WO-DK000031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       538 QYIKANSKFIGITEL 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 QYIKANSKFIGITEL 15
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Best Local Similarity 100.
Matches 15; Conservative
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N-PSDB; ACF35967.
              WPI; 2003-587260/55.
N-PSDB; ACF35966.
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                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 708 AA;
                                                                                                                                                                                                                                                                                                                                                                     in its sequence
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                                                                                                                      polypeptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
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The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCS) in the animal of at least 1 modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.
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                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                           Length 713;
                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 7; I
100.0%; Pred. No. 6.4e-05;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified human CEA-TT P2 and P30 epitopes.
                                             Disclosure; Page 128-131; 140pp; English
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/note= "signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
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17-JAN-2002; 2002US-0350047P.
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                                                                                                                                                                                                                                                                                                                                                                                            415 QYIKANSKFIGITEL 429
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35. .717
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N-PSDB; ACF35964.
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                                                                                                                                                                                                                                                                             Sequence 713 AA;
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                                                                                                                                                                                                                                                in its sequence
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                polypeptide.
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Sequence 750 AA;
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Synthetic.
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           involves effecting uptake and processing by antigen presenting cells (APCB) in the animal of at least 1 modified CBA polypeptide or of a mucroorganism or virus expressing the modified CBA polypeptide or of a microorganism or virus expressing the modified CBA polypeptide to induce a CTL response and an antibody response that targets the autologous CBA. The method is useful in immunizing actively against diseases characterized by cells that express CBA. The present sequence represents a modified human CBA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immune responses to weakly immunogenic, tumor associated peptide for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are
                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
     The method
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                                                                                                                                                                                  100.0%; Score 74; DB 7; Length 717; 100.0%; Pred. No. 6.5e-05; ive 0; Mismatches 0; Indels
carcinoembryonic antigen (CEA) in an animal, e.g. human.
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/label= P30
/note= "foreign epitope"
/label= P2
/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                       AAY92637 standard; protein; 750 AA.
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Birk P, Karlsson G;
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98US-0105011P.
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                                                                                                                                                                                  Query Match
Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                                       Sequence 717 AA;
                                                                                                                            in its sequence
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imune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), hereagulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) corpus derived from the PA and/or at least 1 Erst T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human pSM, FGRBb and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92c19), which appears on pages 184-187
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preserved in the immunogenized forms. The method is used for inducing
                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05;
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/label= P2
/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91 QYIKANSKFIGITEL 105
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98US-0105011P.
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                AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenized antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenized so antibody as an attornation and cysteine residues involved in disulfide bonds are binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide attigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8b (FGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the simular system of: (1) at least I GTL (Cytcoxxix T-lymphocyte) group derived from the PA and/or at least I B-cell group derived from the Coreign to the animal Analogues of human PSM, human HErz and chuman/murine FGF8b comprising a substantial part of all known and chuman/murine FGF8b comprising a substantial part of all known and chuman/murine FGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
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/label= P30
/note= "foreign epitope"
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Example 1; Page; 220pp; English
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98US-0105011P.
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/label= P2
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Best Local Similarity 100.
Matches 15; Conservative
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are compared in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8D (FGPB). The method comprises effecting simultaneous presentation by antigen producing cells (APCB) of the simular system of: (1) at least 1 (CYtocoxic T-1)ymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 B-cell group which is coll-associated PA; and (2) at least 1 B-cell group derived from the PA and (2) at least 1 B-cell group derived from the PA and (2) at least 1 first T helper cell group which is conceined CTL and B-cell epitopes of the respective PA and including at predicted CTL and B-cell epitopes are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8B and Herz, respectively. Note: This sequence was constructed from the baild type human PSM (AAY92619), which appears on pages 184-187 of the automature of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent of the parent 
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100.0%; Pred. No. 6.8e-05;
ive 0; Mismatches 0; Indels
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/label= P2
/note= "foreign epitope"
443. .463
/label= P30
/note= "foreign epitope"
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Birk P, Karlsson
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                                 WPI; 2000-349917/30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200020027-A2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-OCT-1999;
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    Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY92631;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 191
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Dalum I;

Leach D,

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210. .230
/label= p30
/note= "foreign epitope"
606. .620
/label= P2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY92645 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                                                                                                                     3xample 1; Page; 220pp; English.
                                                                                                                                                                                          Birk P, Karlsson G;
                            98DK-00001261.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-AUG-2000 (first entry)
                                                                                                           (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                 Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the specification
                                                                                                                                                                                                                                             WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 750 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the wild
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Synthetic.
                         05-OCT-1998;
20-OCT-1998;
                                                                                                                                                           Steinaa L,
                                                                                                                                                                                             Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY92645;
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8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THE HEAK SON WAY WAY AND THE FIRE AND THE FI
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenized and supplies of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are binding regions and cysteine residues involved in disulfide bonds are contained immunogenized forms. The method is used for inducing immune responses against weakly immunogenize cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), hereagilia? (HPRZ) and/or cibroblast growth factor 8D (FGF8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the simula system of: (1) at least 1 CTL (Cytotoxic T-1ymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the Coreign to the animal. Analogues of human PSM, human Herz and chuman/murine FGF8D comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at the predicted CTL and B-cell epitopes of the respective PA and including to treat prostate, prostate/breast or breast cancer when the PA is human PSM, rGF8D and HerZ, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inducing immune responses to weakly immunogenic, tumor associated peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mutant human prostate specific membrane antigen construct, hPSM1.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antigens for the treatment of breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                     Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                  Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92627 standard; protein; 750 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                        Karlsson G;
                                                                                                                                                            99WO-DK000525.
                                                                                                                                                                                                              98DX-00001261,
98US-0105011P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 100.
Les 15; Conservative
                                                                                                                                                                                                                                                                                           (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                  Mouritsen S,
                                                                                                                                                                                                                                                                                                                         Steinaa L, Mourrant A. Birk P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of the specification
                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 750 AA;
                                                    WO200020027-A2
                                                                                                                                                          05-OCT-1999;
                                                                                                                                                                                                              05-OCT-1998;
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                                                                                                        13-APR-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 193
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                                                                                                                                                                                                                                                                                                                                                                                                                                        antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide tummune responses against weakly immunogenic cell-associated peptide human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (Cyctoxoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell associated PN, and (2) at least 1 first T helper cell group which is cell-associated PN, and (2) at least 1 first T helper cell group which is human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at cleast to the animal. Analogues of the respective PA and including at predicted CTL and B-cell epitopes of the respective PA and including at cleast one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast to breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and Her2, respectively. Note: This sequence was constructed ild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                    AAY92627-49 are mutant immunogenized human prostate specific membrane
                                                                                                                                                          Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mutant human prostate specific membrane antigen construct, hPSM8.3.
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                                                                                                                                                          Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 750;
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                                                                                                                                                       Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 74; DB 3; L. 100.0%; Pred. No. 6.8e-05; tive 0; Mismatches 0;
                                                                                                                                                       Nielsen KG,
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Gaps

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Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.

Homo sapiens. Synthetic.

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Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
            Prograte specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                 (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-349917/30.
                                                                                                                                                                                                                        WO200020027-A2.
                                                                                                                                                                                                                                                                                                        05-OCT-1998;
20-OCT-1998;
                                                                                                                                                                                                                                                                              05-OCT-1999;
                                                                      Homo sapiens
                                                                                                                                                                                                                                                   13-APR-2000,
                                                                                Synthetic.
                                                                                                                         Peptide
                                                                                                                                                                  Peptide
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AAY92638
                                                                                                              Key
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                                                                                                                                                                                                                                                                                                                                                                                                            AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenic cell-associated peptide contributions (PA) such as those associated with cancers (self-proteins), e.g. mimune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), herequlin 2 (Her2) and/or fibroblast growth factor 80 (FGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and (Or at least 1 B-cell group derived from the PA and (2) at least 1 B-cell group derived from the CC ell-associated PA, and (2) at least 1 B-cell group which is foreign to the animal. Analogues of human PSM, human Her2 and creat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8D and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 cof the specification
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                                                                                                                                                                                                                                                                                                                                              Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                              Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                             Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                            Haaning J,
                         17. .31
/label= P2
/note= "foreign epitope"
                                                                                            note= "foreign epitope"
                                                                                                                                                                                                                                                                          Steinaa L, Mouritsen S, Nielsen KG,
Gautam A, Birk P, Karlsson G;
            location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92632 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Page; 220pp; English
                                                                                                                                                                              99WO-DK000525
                                                                                                                                                                                                                      98US-0105011P
                                                                                                                                                                                                        98DK-00001261
                                                                32. .52
/label= P30
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Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                (MEBI-) M & B BIOTECH AS.
                                                                                                                                                                                                                                                                                                                    WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 750 AA;
                                                                                                                         WO200020027-A2
                                                                                                                                                                              05-OCT-1999;
                                                                                                                                                                                                        05-OCT-1998;
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                                                                                                                                                    13-APR-2000
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                                                                  Peptide
                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 194
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Dalum I;

Leach D,

Haaning J,

Nielsen KG,

98DK-00001261. 98US-0105011P. 99WO-DK000525

/label= P2 /note= "foreign epitope" 607. .627 /label= P30 /note= "foreign epitope"

Location/Qualifiers

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AMY 1826.749 are mutant immunogenized numan prostate specific memorane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide articles (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting animals immune system of: (1) at least 1 CTL (cytocoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the call-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and chuman manimurine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least prostate, prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the bean and the PA and the PA and the PA and the PA and the PA and the PA and the PA and the PA and the PA and the PA and PA and the PA and PA
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                                                                                                                           AAY92627-49 are mutant immunogenized human prostate specific membrane
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100.0%; Pred. No. 6.8e-05;
iive 0; Mismatches 0; Indels
Example 1; Page; 220pp; English.
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Best Local Similarity 100.
Matches 15; Conservative
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us-09-806-703a-12.rag

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(MEBI-) M & E BIOTECH AS.
                                                                                      WPI; 2000-349917/30.
                                                                                                                                                            Sequence 750 AA;
                                                     WO200020027-A2.
                            Homo sapiens
                                                               05-OCT-1999;
         10-AUG-2000
                                                                    05-OCT-1998;
                                                                      20-OCT-1998;
                                                          13-APR-2000
                              Synthetic.
    AAY92638:
                                     Peptide
                                            Peptide
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Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                       Mutant human prostate specific membrane antigen construct, hPSM8.0.
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                                                                                                                                          AAY92640 standard; protein; 750 AA.
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                             213 QYIKANSKFIGITEL 227
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98US-0105011P
       1 QYIKANSKFIGITEL 15
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/label= P2
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Gautam A, Birk P,
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                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
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Peptide
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                                                                                                                                                  Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                Mutant human prostate specific membrane antigen construct, hPSM3.1
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| Jabel = P30
| /note = "foreign epitope"
213. .227
                                                                                                                                                                                                                                                                                                                                                                213. .227
/label= P2
/note= "foreign epitope"
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AAY92638 standard; protein; 750 AA.
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Gautam A, Birk P, Karlsson G;
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                                                                             (first entry)
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AMYANGALY-49 AFE MULTAIN IMMUNOGENIZED NUMBAN procretate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide artigens (PA) such as those associated with cancers (Belf-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and chuman/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least prostate, prostate, prostate (Preses or breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the manners.
                                                                                                                                                                                                                                                        Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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     Dalum I;
Haaning J, Leach D,
     Nielsen KG,
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                                                Karlsson G;
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Gaps

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100.0%; Score 74; DB 3; Length 750; ilarity 100.0%; Pred. No. 6.8e-05; Conservative 0; Mismatches 0; Indels

Best Local Similarity Matches 15; Conserv

Query Match

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                                     Gaps
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100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels
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/label= P30
/note= "foreign epitope"
674. .688
/label= P2
/note= "foreign epitope"
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Birk P, Karlsson G;
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98US-0105011P.
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                                                                                     606 QYIKANSKFIGITEL 620
                                                               1 QYIKANSKFIGITEL 15
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                                   Conservative
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                  Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
Synthetic.
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20-OCT-1998;
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 Query Match
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Matches
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to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGFBb and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
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                                                                                                                                                                                                       100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24. .38
/label= P2
/note= "foreign epitope"
673. .633
/label= P30
/note= "foreign epitope"
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Gautam A, Birk P, Karlsson G;
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98US-0105011P.
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                                                                                                                                                   Sequence 750 AA;
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Best Local 8
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animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) cerl-associated by and/or at least 1 B-cell group derived from the cell-associated by, and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the man pSM (AAV92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         immune responses to weakly immunogenic, tumor associated peptide for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                    3; Length 750;
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                                                                                                                                                                                                               Score 74; DB 3; I
Pred. No. 6.8e-05;
; Mismatches 0;
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10. 230
Aabel= P30
Anote= "foreign epitope"
674. 688
Alabel= P2
Anote= "foreign epitope"
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lirk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                 AAY92646 standard; protein; 750 AA.
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100.0%;
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98US-0105011P.
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                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           10-AUG-2000 (first entry)
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                                                                                                                                                        of the specification
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                                                                                                                                                                                    Sequence 750 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200020027-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
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antigens f
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide
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                                                                                                                                                                                                                                                                                                                                                    RESULT 199
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preserved in the immunogenized former. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or thuman prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or (Tibroblast growth factors Bb (FGFBb). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cyctoxic T-lymphocyte) cell-associated PA, and (2) at least 1 first T helper cell group derived from the Coreign to the animal. Analogues of human PSM, human Her2 and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGPB and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
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regions and cysteine residues involved in disulfide bonds are
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                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mutant human prostate specific membrane antigen construct, hPSM1.2.
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                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05;
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                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY92634 standard; protein; 750 AA.
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3irk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 100.0%;
Matches 15; Conservative (
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/label= P30
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                                                                                                                                                                                                                                                                                                                  Sequence 750 AA;
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Synthetic.
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24..38
/label= P2
/note= "foreign epitope"
210..230
/label= P30
/note= "foreign epitope"
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     Example 1; Page; 220pp; English
                                                                                                                                                                                                                                                                                                                                                    99WO-DK000525
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98US-0105011P
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                                                                                                                                                     Local Similarity 100.
nes 15; Conservative
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                                                                                                                                      Sequence 750 AA;
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20-OCT-1998;
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                                                                                                                                                                                                                                                                             Synthetic
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                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                          Peptide
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Matches
                                                                                                                                                                                               RESULT 201
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ocation/Qualifiers

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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are controlled to the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide autigens (PA) such as those associated with cancers (self-proteins), e.g. autigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8D (FGF8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC9) of the simula system of: (1) at least 1 CTL (cytocoxic T-lymphocyte) croll-associated PA, and (2) at least 1 B-cell group derived from the CC cell-associated PA, and (2) at least 1 B-cell group which is contained or to the animal. Analogues of the respective PA and including at the predicted CTL and B-cell epitopes of the respective PA and including at contained or predicted CTL and B-cell epitopes are also claimed. The method is used to the creat prostate, prostate/breast or breast cancer when the PA is human PSM, FGP8D and Herz, respectively. Note: This sequence was constructed for the process of the respective or pages 184-187 or from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                 Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
        Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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     Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels
  Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "foreign epitope"
  Nielsen KG,
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                                                                                                                                                                                                                 Example 1; Page; 220pp; English.
                              Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-DK000525.
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     Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15, Conservative
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/label=
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                                                                                WPI; 2000-349917/30.
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Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 750 AA;
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'n
                           Gautam A,
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Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mutant human prostate specific membrane antigen construct, hPSM1.3.
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tumor associated peptide

Dalum I;

Leach D,

Haaning J,

Nielsen KG,

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Inducing immune responses to weakly immunogenic, tumor as antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                             Steinaa L, Mouricsen J,
                                                                           99WO-DK000525.
                                                                                                                              98US-0105011P.
                                                                                                              98DK-00001261
                                                                                                                                                               (MEBI-) M & E BIOTECH AS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of the specification
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Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 750 AA;
       WO200020027-A2
                                                                           05-OCT-1999;
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                                        13-APR-2000.
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                                                                                                                                                                                                                                         AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic calaimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immuno responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGR8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) commands immune system of: (1) at least 1 B-cell group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 Brist T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and prostate
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                                                                                                                                                          Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                         Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mutant human prostate specific membrane antigen construct, hPSM1.5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                         Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; Indels ive 0; Mismatches 0; Indels
                                                                         Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label= p2
/note= "foreign epitope"
301. 321
/label= p30
/note= "foreign epitope"
                                                                       Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92636 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                             Example 1; Page; 220pp; English.
                                                                                        Birk P, Karlsson G;
 98US-0105011P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24 QYIKANSKFIGITEL 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-AUG-2000 (first entry)
                                                                       Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.
Best Local Similarity 100.
Matches 15; Conservative
                                    (MEBI-) M & B BIOTECH AS
                                                                                                                         WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 750 AA;
20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
Synthetic.
                                                                       Steinaa L,
                                                                                         Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY92636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 203
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are binding regions and cysteine residues involved in disulfide bonds are contained memoragenic real-associated peptide artigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the cimmals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 Broth disper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human mad cypredicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used content prostate, prostate Phesast or Present cancer when the PA is human now FORPA and including at the tentes of the respective PA and including and receive the parance of the respective PA and including and now present prostate, prostate or Present or present prostate, prostate or present or present or present prostate, prostate or present or present prostate, prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present prostate or present or present present present present prese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mutant human prostate specific membrane antigen construct, hPSM10.0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prostate specific membrane antigen; immunogenized construct; mutant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vaccination, cytotoxic T-lymphocyte immunity, breast cancer, prostate cancer, cell-associated peptide antigen, foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Fr.
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Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                     human/murine FGP8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human
                                                                                                                                                                                                                                                                                                                                                                                                                          PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
                                                                                                                                            Dalum I;
                                                                                                                                            Haaning J, Leach D,
674. .688
/label= P2
/note= "foreign epitope"
                                                                                                                                            Nielsen KG,
                                                                                                                                                                                                                       Example 1; Page; 220pp; English.
                                                                                                                                                      Birk P, Karlsson G;
                                                                          99WO-DK000525.
                                                                                             98DK-00001261
98US-0105011P
                                                                                                                                            Mouritsen S,
                                                                                                                         (MEBI-) M & B BIOTECH AS.
                                                                                                                                                                       WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 750 AA;
                                      WO200020027-A2
                                                                                             05-OCT-1998;
20-OCT-1998;
                                                                          05-OCT-1999;
                                                        13-APR-2000
                                                                                                                                        Steinaa L,
                                                                                                                                                      Gautam A,
 Peptide
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                                   Gaps
                                                                                                                                                                                                                                                                                                   Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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                                   ö
100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                          AAY92644 standard; protein; 750 AA.
                                                                                   674 QYIKANSKFIGITEL 688
                                                              1 QYIKANSKFIGITEL 15
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                Local Similarity 100.
168 15; Conservative
                                                                                                                                                                                                       AAY92644;
 Query Match
                   Best Loca
Matches
                                                                                                                                            RESULT 205
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ADL90427 standard; protein; 872 AA.

RESULT 206

ADL90427

17-JUN-2004 (first entry)

ADL90427;

SXXXE

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The immunogenic analogues of PSM can be used in the claimed method as an automorch to induce a CTL response. Subdominant CTL epitopes, antibody cutovarcation to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are binding regions and cysteine residues involved in disulfide bonds are commune responses against weakly immunogenic cell-associated poppide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or chimisals growth factors By (FGRBD). The method comprises effecting simultaneous presentation by antigen producing cells (APGs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) commans is immune system of: (1) at least 1 first place of the animals immune system of: (2) at least 1 first and an operation by antigen to the animal. Analogues of human PSM, human Her2 and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGPBb and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 cof the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY92627-49 are mutant immunogenized human prostate specific membrane
                                                                                                                                                                                                                                                                                                                                                                                              Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                      448. .462
/label= P2
/note= "foreign epitope"
                                                                      210. .230
/label= P30
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                Nielsen KG,
                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                              Birk P, Karlsson G;
                                                                                                                                                                                                                                                                     99WO-DK000525.
                                                                                                                                                                                                                                                                                                       98DK-00001261.
98US-0105011P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                              Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                            (MEBI-) M & B BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-349917/30.
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                                                                                                                                                                                                WO200020027-A2.
Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                     35-OCT-1999;
                                                                                                                                                                                                                                                                                                       05-OCT-1998;
                                                                                                                                                                                                                                                                                                                       20-0CT-1998;
                                                                                                                                                                                                                                  13-APR-2000.
                                                                                                                                                                                                                                                                                                                                                                                          Steinaa L,
                                                                                                                                                                                                                                                                                                                                                                                                                  Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                      Peptide
                                                                                                                          Peptide
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Immune response; immunoglobulin; Ig; tetanus toxin.

Tetanus toxin protein, SEQ ID 25.

(first entry)

17-JUN-2004

Wang L, Smith D, Phillips B;

Bot A,

(ASTR-) ASTRAL INC.

WPI; 2004-295415/27.

18-SEP-2003; 2003WO-US030188. 20-SEP-2002; 2002US-0412219P. 14-MAR-2003; 2003WO-US007995.

WO2004027049-A2.

01-APR-2004.

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The present invention describes a single chain polypeptide comprising clostridial neurotoxin light and heavy chains. The single chain polypeptide comprises 2 domains: the first domain is a clostridial neurotoxin light chain, or its fragment or variant, which is capable of cleaving one or more vesicle or plasma membrane associated proteins essential to exceptosis; the second domain is a clostridial neurotoxin charvy chain H-N portion, or its fragment or variant, which is capable of translocating the polypeptide compared to the Solublity of the first comain on its own. The second domain lacks a functional C-terminal part of a clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors that are to polypeptide incapable of binding to cell surface receptors that are the natural cell surface receptors to which native clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors to which native clostridial neurotoxin heavy chain, designated clostridial neurotoxin chain polypeptide described above. The single encoding the single chain polypeptide described above. The single chain polypeptides can be used as positive controls for toxin assays, as reagent components for the synthesis of therapeutic molecules, or for developing vaccines against clostridial toxin. The polypeptides are also useful as non-toxic standards for the assessment and development of in vitro assays for detection of functional botulinum or tetanus neurotoxins in foodstuffs or environmental samples. The present sequence is used in the part of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Chaddock J, Marks P, Sutton MJ, Stancombe P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                      clostridial neurotoxin heavy chain; Clostridium; neurotoxin; exocy
antibacterial; vaccine; toxin assay; clostridial toxin; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                               chain polypeptide; clostridial neurotoxin light chain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 74; DB 8; Length 872; 100.0%; Pred. No. 8e-05; tive 0; Mismatches 0; Indels
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Clostridial neurotoxin amino acid sequence SEQ ID NO:145.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; SEQ ID NO 145; 588pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADL90085 standard; protein; 875 AA.
                                                                                                                                                                                                                                                                                                                                                                                          (HEAL-) HEALTH PROTECTION AGENCY.
                                                                                                                                                                                                                                                                                                                                                   12-SEP-2002; 2002US-00241596.
                                                                                                                                                                                                                                                                                                        12-SEP-2003; 2003WO-GB003824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QYIKANSKFIGITEL 837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Shone CC, Foster KA,
Wayne J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2004-270039/25.
                                                                                                                                   botulinum; tetanus
                                                                                                                                                                         Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; ADL90426.
                                                                                                                                                                                                                    WO2004024909-A2
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                                                                 single
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                                                                                                                                                                                                                                                                                                   Generating an immune response to an antigen, useful for generating desired T cell responses comprises administering an immunoglobulin having one peptide epitope of the antigen attached to the immunoglobulin.
                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to a method for generating an immune response to an antigen in a patient. The method comprises administering to the patient an immunoglobulin (Ig) or its portion where the Ig has at least one peptide epitope of the antigen attached to the Ig or its portion and administering the immunoglobulin or its portion in conjunction with a RNA segment. The present sequence is an antigen sequence, used to illustrate the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single chain polypeptide; clostridial neurotoxin light chain; clostridial neurotoxin heavy chain; Clostridium; neurotoxin; exocytosis; antibacterial; vaccine; toxin assay; clostridial toxin; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 875;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridial neurotoxin amino acid sequence SEQ ID NO:143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 8; I
100.0%; Pred. No. 8.1e-05;
Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                        Disclosure, Fig 1J; 154pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-SEP-2003; 2003WO-GB003824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   390 QYIKANSKFIGITEL 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-SEP-2002; 2002US-00241596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JUN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         botulinum; tetanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 875 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004024909-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADL90425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 208
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ADL90085;

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The present invention describes a single chain polypeptide comprising colostridial neurotoxin light and heavy chains. The single chain polypeptide comprises 2 domains: the first domain is a clostridial neurotoxin light chain, or its fragment or variant, which is capable of cleaving one or more vesicle or plasma membrane associated proteins essential to exceptosis; the second domain is a clostridial neurotoxin heavy chain H-N portion, or its fragment or variant, which is capable of translocating the polypeptide compared to the solubility of the polypeptide compared to the solubility of the first domain on its own. The second domain lacks a functional C-terminal part of a clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors to which native clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors to which native clostridial neurotoxin hinds. Also described is a nucleic acid molecule encoding the single chain polypeptide described above. The single chain polypeptide described above. The single chain polypeptides can be used as positive controls for toxin assays, as creagent components for the synthesis of therappetic and developing vaccines against clostridial toxin. The polypeptides are also useful as non-toxic standards for the assessment and development of in
                                                                                                                                                                           New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vitro assays for detection of functional botulinum or tetanus neurotoxins in foodstuffs or environmental samples. The present sequence is used in the exemplification of the present invention.
                       Shone CC, Foster KA, Chaddock J, Marks P, Sutton MJ, Stancombe P;
Wayne J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single chain polypeptide; clostridial neurotoxin light chain; clostridial neurotoxin heavy chain; Clostridium; neurotoxin; exocy antibacterial; vaccine; toxin assay; clostridial toxin; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 74; DB 8; Length 879; Best Local Similarity 100.0%; Pred. No. 8.1e-05; Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clostridial neurotoxin amino acid sequence SEQ ID NO:147.
                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 143; 588pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADL90429 standard; protein; 887 AA.
(HEAL-) HEALTH PROTECTION AGENCY
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                                                                                                         WPI; 2004-270039/25.
N-PSDB; ADL90424.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 879 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004024909-A2.
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The present invention describes a single chain polypeptide comprising clostridial neurotoxin light and heavy chains. The single chain clostridial neurotoxin light and heavy chains. The single chain clostridial neurotoxin light chain, or its fragment or variant, which is capable of cleaving one or more vesicle or plasma membrane associated proteins essential to exocytosis; the second domain is a clostridial neurotoxin heavy chain H-N portion, or its fragment or variant, which is capable of translocating the polypeptide into a cell and/or increasing the companies of the polypeptide compared to the solubility of the pilypeptide compared to the solubility of the first of a clostridial neurotoxin heavy chain, designated H-C, which renders the neutral cell surface receptors to which native clostridial neurotoxin beinds. Also described as another according the single chain polypeptide described above. The single chain polypeptide described above. The single chain polypeptide described above. The single chain polypeptides can be used as positive controls for toxin assays, as antibacterial activity, and can be used in vaccines. The single chain polypeptides and be used as positive controls for toxin assays, as creagent components for the synthesis of therapeutic molecules, or for developing vaccines against clostridial toxin. The polypeptides are also viero assays for detection of functional botulinum or tetanus neurotoxins in foodstuffs or environmental samples. The present sequence is used in the exemplification of the present invention.
                                                                                                                                                                 New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin.
                                                     Stancombe P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clostridium tetani; TeNT; tetanus toxin; antibacterial; vaccine; TeNT fragment C; infection.
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                                                     Sutton MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB B; 1 100.0%; Pred. No. 8.2e-05;
                                                     Marks P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                 Claim 1; SEQ ID NO 147; 588pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB61169 standard; protein; 1315 AA.
                                                   Chaddock J,
                 (HEAL-) HEALTH PROTECTION AGENCY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-JUN-2000; 2000WO-GB002428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99GB-00014861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         830 OYIKANSKFIGITEL 844
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridium tetani TeNT.
                                                     Foster KA,
                                                                                                             WPI; 2004-270039/25.
N-PSDB; ADL90428.
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                                                     Shone CC,
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                                                                       Wayne J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 210
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Gaps

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12-SEP-2002; 2002US-00241596

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New polypeptide, useful for treating infections of Clostridium tetani, comprises tetanus toxin fragment with a mutation in a loop region,.
(UNLO ) IMPERIAL COLLEGE SCI TECHNOLOGY & MED.
                                                                                                                                                                                                                                                                                                                               Disclosure; Page 39; 43pp; English.
                                                                        Sinha K;
                                                                    Fairweather NF,
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The present sequence is given in a specification relating to a novel polypeptide comprising tetanus toxin (TeNT) fragment C or its immunogenic fragment, containing a mutation in a loop region. The mutation results in a reduction in the binding of TeNT fragment C or its immunogenic fragment to gangliosides and primary motoneurones, and/or a reduction in the ability of TeNT fragment C or its immunogenic fragment to undergo retrograde transport. The polypeptide is useful for treating, preventing and reducing the susceptibility to Clostridium tetani infection in a human or animal, and also for producing antibodies which recognise groups within TeNT polypeptides. Antibody produced against the polypeptide is also useful for treating Clostridium tetani infection

Sequence 1315 AA;

. 0 100.0%; Score 74; DB 4; Length 1315; 100.0%; Pred. No. 0.00013; tive 0; Mismatches 0; Indels (Conservative Query Match Best Local Similarity Matches 15; Conserv

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ADL90423' standard; protein; 1315 AA. ADL90423;

17-JUN-2004 (first entry)

Clostridial neurotoxin amino acid sequence SEQ ID NO:141.

single chain polypeptide; clostridial neurotoxin light chain; clostridial neurotoxin, exocytosis; antibacterial; vaccine; toxin assay; clostridial toxin; detection; botulinum; tetanus

Clostridium tetani.

WO2004024909-A2

25-MAR-2004.

12-SEP-2003; 2003WO-GB003824.

12-SEP-2002; 2002US-00241596.

(HEAL-) HEALTH PROTECTION AGENCY.

Stancombe P; Chaddock J, Marks P, Sutton MJ, Shone CC, Foster KA, Маупе Ј;

2004-270039/25. N-PSDB; ADL90422 New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin.

Disclosure; SEQ ID NO 141; 588pp; English.

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The present invention assumpte cuarm, perspective comprises. Clostridial neurotoxin light and heavy chains. The single chain polypeptide comprises 2 domains: the first domain is a clostridial neurotoxin light chain, or its fragment or variant, which is capable of cleaving one or more vesicle or plasma membrane associated proteins essential to exocytosis; the second domain is a clostridial neurotoxin can be avoided to the second domain or a clostridial neurotoxin the avoided into a clostridial neurotoxin the polypeptide into a clostridial neurotoxin heavy chain, as functional C-terminal part of a clostridial neurotoxin heavy chain, designated H-C, which renders the neurotoxin heavy chain, designated H-C, which renders the neurotoxin heavy chain and the polypeptide incapable of binding to cell surface receptors that are the neurotoxin described is a mucleic acid molecule encoding the single chain polypeptide described above. The single chain polypeptide has polypeptides can be used as positive controls for textine stays, as reagent components for the synthesis of therapeutic molecules, or for developing vaccines against clostridial toxin. The polypeptides are also useful as non-toxic standards for the assessment and development of in vitro assays for detection of functional botulinum or tetanus neurotoxins in foodstuffs or environmental samples. The present sequence is used in the exemplification of the present invention. a single chain polypeptide comprising

Sequence 1315 AA;

Gaps .; 0 Length 1315; 0; Indels 100.0%; Score 74; DB 8; L 100.0%; Pred. No. 0.00013; iive 0; Mismatches 0; Query Match
Best Local Similarity 100..
Best Local Similarity 100..

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Search completed: January 26, 2005, 07:08:38 Job time : 102,333 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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OM protein - protein search, using sw model

January 25, 2005, 06:04:09; Search time 18.0833 Seconds (without alignments) 111.736 Million cell updates/sec . .

US-09-806-703A-14

112 1 FNNFTVSFWLRVPKVSASHLE 21 Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100%

Listing first 45 summaries

PIR 79:* Database :

pir1:*
pir2:*
pir3:*
pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		æ			SUMMAKIES	
Result No.	Score	Query Match	Length	DB	QI	Description
-	112	100.0		-	BTCLTN	tentoxilysin (EC 3
7	62	55.4	1268	7	S33411	botulinum neurotox
m	19	54.5		~	S48110	neurotoxin type F
4	19	•		7	S48109	neurotoxin type F
S	61	54.5	1274	N	I40813	neurotoxin type F
9	61	54.5	1297	~	S39791	neurotoxin - Clost
7	59	52.7	1296	Н	BTCLAB	bontoxilysin (EC 3
80	28	51.8	1291	Н	A48940	bontoxilysin (EC 3
σ	58	51.8	1291	~	I40631	non-proteolytic bo
10	99	50.0	367	7	S48106	neurotoxin type E
11	26	50.0	1251	7	JH0256	botulinum neurotox
12	26	50.0		N	S21178	botulinum neurotox
13	26	50.0	129	N	140645	botulinum neurotox
14	52	46.4		~	S23158	nucleocapsid prote
15	52	46.4	464	Н	MINIONC	nonstructural prot
16	52	46.4		Н	MINVUW1	nonstructural prot
17	51	45.5			JQ1467	
18	51	45.5	1196	~	S46430	botulinum neurotox
19	49	43.8			T33493	hypothetical prote
20	48	42.9			T47446	
21	48	42.9			S70582	3
22	48	42.9			A49777	botulinum neurotox
23	48	42.9	1291		S46431	botulinum neurotox
24	47.5	42.4			S11455	botulinum neurotox
25	47	42.0	359	7	F87937	protein F14B6.6 [i
56	47	42.0	38	~	T20879	hypothetical prote
27	47	42.0	46	7	B37837	probable alpha-amy
28	46	41.1	322	7	T25966	hypothetical prote
53	46	41.1	442	7	I47074	ມ

probable myb-like	unknown protein Fl	progenitor toxin n	botulinum toxin no	hypothetical prote	hypothetical prote	conserved hypothet	enterochelin ester	spheroidene monoox	probable membrane	hypothetical prote		hypothetical prote		· -	_
T38197	C36668	A47708	140817	T41362	T39081	A82470	AD0574	S04401	D64943	B99945	E85793	A90711	E85561	T20858	F83884
2 T38197	2 C9666B	2 A47708	2 I40817	2 T41362	2 T39081	2 A82470	2 AD0574	2 S04401	2 D64943	2 B99945	2 E85793	2 A90711	2 E85561	2 T20858	2 F83884
496 2 T38197	~	7	~	7	7	7	7	~	~	7	~	~	7	7	7
20	753 2 0	1162 2 #	1162 2	528 2	886 2	209 2	404 2	591 2	152 2	152 2	152 2	381 2	381 2 1	514 2 7	781 2 1
41.1 496 2 7	41.1 753 2 (41.1 1162 2 #	41.1 1162 2	528 2	40.2 886 2	209 2	404 2	591 2	152 2	152 2	152 2	381 2	381 2 1	514 2 7	781 2 1

ALIGNMENTS

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rsor - Clostridium tetani

tetanus neurotoxin ternate names:

Cispecies: Clostridium tetanii Cispecies: Clostridium tetanii Cibate: 31-Mar-1988 #sequence revision 31-Mar-1988 #text change 09-Jul-2004 Ciscession: A25689; A2575; Ā25194; B25194; A60759; S69348; S09364 R;Eisel, U.; Jarausch, W.; Goretzki, K.; Henschen, A.; Engels, J.; Weller, U.; Hudel, M EMBO J. 5, 2495-2502, 1986 A;Title: Tetanus toxin: primary structure, expression in E. coli, and homology with bot A;Reference number: A25689; MUID:87053814; PMID:3536478

A; Molecule type: DNA A; Residues: 1-1115 <ELSA A; Cross-rences: UNIPROT: P04958; GB:X04436; NID:g40769; PIDN:CAA28033.1; PID:g40770 A; Cross-rences: Ly TB: Lyness, V.A. Nucleic Acids Res. 14, 7809-7812, 1986 A; Title: The complete nucleotide sequence of tetanus toxin. A; Reference number: A25757; MUID:87040747; PMID:3774547

of tetanus toxin fragment C in A Molecule type: DNA A;Residues: 1-1315 <FAIS A;Cross-references: GB:X06214; NID:g40773; PIDN:CAA29564.1; PID:g40774 A;Experimental source: strain CN3911 R;Fairweather, N.F.; Lyness, V.A.; Pickard, D.J.; Allen, G.; Thomson, R.O. J. Bacteriol. 165, 21-27, 1986 A;Fitle: Cloning, nucleotide sequencing, and expression of tetanus toxin fi A;Reference number: A25194; MUID:86085672; PMID:3510187

A;Accession: A25194 A;Molecule type: DNA A;Residues: 743-1315 <FA2> A;Cross-references: GB:M12739; NID:g144920; PIDN:AAA23282.1; PID:g144921 A;Accession: B25194

A;Molecule type: protein A;Residues: 865-894 <RA: R;Residues: 865-894 <RA: R;Mateuda, M.; Lei, D.L.; Sugimoto, N.; Ozutsumi, K.; Okabe, T. Infect. Immun. 57, 3588-3593, 1989 A;Title: Isolation, purification, and characterization of fragment B, the NH-2-terminal A;Reference number: A60759; MUID:90035436; PMID:2478476

A; Molecule type: protein
A; Residues: 461-475 < kMar>
A; Residues: 461-475 < kMar>
B; Demotz, S.; Lanzavecchia, L.; Eisel, U.; Niemann, H.; Widmann, C.; Corradin, G.
J. Immunol. 142, 394-402, 1989
A; Title: Delineation of several DR-restricted tetanus toxin T cell epitopes.
A; Reference number: JS0098; MUDD: 89093918; PMID: 2463305
A; Contents: annotation; epitope region
B; Schiavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGupta, B.
Nature 359, 832-835, 1992
A; Title: Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteoly A; Reference number: S7125; MUD: 93063293; PMID: 1331807
A; Contents: annotation

Gaps

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1; Indels

Length 366

Score 61; DB 2; Pred. No. 0.032;

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A;Cross-references: UNIPROT:Q57236; EMBL:X70821; NID:g407792; PIDN:CAA50152.1; PID:g407.
C;Superfamily: tetanus toxin
C;Keywords: neurotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA A;Residues: 1-369 «CAM»
A;Residues: 1-369 «CAM»
A;Cross-references: UNIPROT:P30996; EMBL:X70820; NID:g407790; PIDN:CAAS0151.1;
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, Januar C;Superfamily: tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neurotoxin type F - Clostridium botulinum (fragment)
C;Species: Clostridium botulinum
C;Species: 12-Peb-1998 #sequence_revision 20-Feb-1998 #text_change 09-Jul-2004
C;Accession: 848109
R;Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A;Title: Gene probes for identification of the botulinal neurotoxin gene and shacession: $48109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         54.5%; Score 61; DB 2; Length 369; 57.1%; Pred. No. 0.032;
                                                                                                                                                                                                                    5; Mismatches
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                                                                                                                                                           54.5%;
57.1%;
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297 YQNFSISFWVRIPK 310
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Best Local Similarity 57.1-
Best Local Similarity 57.1-
Best Local Similarity
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A, Residues: 2-31 cDEF-
C, Comment: The source of this protein was an extrachromosomal plasmid.
C, Comment: The source of this protein was an extrachromosomal plasmid.
C, Comment: The precursor is cleaved by endogenous proteinase activity to form light (fradual chains are not toxic when separated). The amino end of the heavy chain (fragment B) C, Comment: Fragment B forms ion channels in a lipid bilayer. Fragment C binds to ganglic C, Comment: This potent neurotoxin binds to peripheral neuronal synapses, is internalized presynaptic neurons. It inhibits neurotransmitter release by proteolytic cleavage of sy
                                                                                                                                                                                                                                                                                                                                                              C, Function:
A, Description: blocks neuroexocytosis via hydrolysis of a Gln-Phe peptide bond in synapt
A, Description: blocks neuroexocytosis via hydrolysis of a Gln-Phe peptide bond in synapt
C, Superfamily: tetanus toxin
C, Superfamily: tetanus toxin
C, Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc
F; 2-457/Product: tentoxylysin light chain (fragment A) #status predicted <TTL>
F; 461-1315/Product: tentoxylysin heavy chain (fragment B.C) #status experimental <TTH>
F; 461-864/Domain: channel forming (fragment C) #status predicted <TXC>
F; 865-1315/Domain: ganglioside binding (fragment C) #status predicted <TXC>
F; 233,237/Binding site: zinc (His) #status predicted
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C;Species Clostridium barati
C;Species Clostridium barati
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 09-Jul-2004
C;Accession: S33411; S31860
C;Accession: S33411; East, N.K.; Allaway, D.; Collins, M.D.; Richardson, P.T.
Firlompson, D.E.; Hutson, R.A.; Past, 1993
A;Title: Nucleotide sequence of the gene coding for Clostridium barati type F neurotoxin
A;Reference number: S33411; MUID:93252228; PMID:8486245
A;Status; preliminary
R,de Filippis, V.; Vangelista, L.; Schiavo, G.; Tonello, F.; Montecucco, C.
Bur. J. Blochem. 229, Gl. -69, 1995
A,Title: Structural studies on the zinc-endopeptidase light chain of tetanus neurotoxin.
A,Reference number: 869348; MUID:95262688; PMID:7744050
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A;Cross-references: UNIPROT: Q45851; EMBL: X68262; NID: g49138; PIDN: CAA48329.1; PID: g49139 C;Superfamily: tetanus toxin C;Keywords: neurotoxin
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Pred. No. 0.082;
4; Mismatches 1; Indels
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922 YQNFSVSFWVRIPK 935
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                                                                                A; Reference number:
A; Accession: S69348
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EMBL:X70820; NID:g407790; PIDN:CAA50151.1; PID:g407, submitted to the EMBL Data Library, January 1993

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neurotoxin type F - Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Date: 16-Aug-1996 #sequence_revision 16-Aug-1996 #text_change 09-Jul-2004
C;Accession: 140813 548108
R;East, A.K.; Richardson, P.T.; Allaway, D.; Collins, M.D.; Roberts, T.A.; Thompson, D.P. FREMS Microbiol. Left. 96, 225-230, 1992
A;Title: Sequence of the gene encoding type F neurotoxin of Clostridium botulinum.
A;Reference number: 140813
A;Accession: 140813
A;Accession: 1-1274 <RES>
A;Cross-references: Unitro 130996; GB:M92906; NID:g144866; FIDN:AAA23263.1; FID:g14486'
A;Cross-references: Unitro 131, 2255-2262, 1993
A;Title: Gene probes for identification of the botulinal neurotoxin gene and specific is A;Reference number: 548108
A;Accession: 548108
A;Accession: S48108
A;Accession: S48108
A;Accession: A;Batt, A, Molecule type and specific is A;Accession: A;Batt, A, Molecule type and shown
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Pred. No.
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C;Superfamily: tetanus toxin
C;Keywords: disulfide bond; hydrolase; metalloproteinase; neurotoxin; transmembrane pro
F;2-444/Product: bontoxilysin A light chain #status experimental <LGHT>
F;445-1296/Product: bontoxilysin A heavy chain #status experimental <HVY>
F;223,227/Binding site: zinc (His) #status predicted
F;224/Active site: Glu #status predicted
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NyAlternate names: botulinum neurotoxin type B (BoNT/B)
Syspecies Clostridium botulinum
C;Species Clostridium botulinum
C;Species 19-Dec-1993 #sequence revision 18-Nov-1894 #text change 09-Jul-2004
C;Accession: A48940; 848105; $21575; A42871; $07155; $08562; $07128; $08573; $08574
C;Accession: A48940; S48105; $21575; A42871; $07155; $08562; $07128; $08573; $08574
Appl. Environ. Microbiol. 58, 2345-2354, 1992
A;Title: Molecular cloning of the Clostridium botulinum structural gene encoding the ty
A;Reference number: A48940; MUID:92384550; PMID:1514783
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A;Molecule type: DNA
A;Residues: 1-1291 <WHB>
A;Residues: 1-1291 <WHB>
A;Residues: 1-1291 <WHB>
A;Residues: 1-1291 <WHB>
A;Cross-references: UNIPROT:P10844; GB:M81186; NID:g144734; PIDN:AAA23211.1; PID:g14473
A;Cross-references: type B, Danish
A;Note: sequence extracted from NCBI backbone (NCBIN:112080, NCBIP:112081); this public
A;Note: sequence extracted from NCBI backbone (NCBIN:112080, NCBIP:112081); this public
A;Note: sequence extracted from NCBI backbone (NCBIN:112080, NCBIP:112081); this public
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R;Gimenez, J.A.; DasGupta, B.R.
J. Protein Chem. 12, 351-363, 1993
A;Title: Boculinum type A neurotoxin digested with pepsin yields 132, 97, 72, 45, 42,
A;Reference number: A53884; MUID:94000342; PMID:8397793
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A,Realdues: 2-47 cABAS,
A,Realdues: 2-47 cABAS,
B,Binz, T.; Blasi, J.; Yamasaki, S.; Baumeister, A.; Link, E.; Suedhof,
J. Biol. Chem. 269, 1617-1620, 1994
A,Title: Proteolysis of SNAP-25 by types E and A botulinal neurotoxins.
A,Reference number: A49708; MUID:94124495; PMID:8294407
A,Contents: annotation
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Pred. No. 0.26;
4; Mismatches 2; Indels
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Best Local Similarity 57.1%;
Matches 8; Conservative
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938 YENFSTSFWIRIPK 951
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A;Accession: A27000
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C;Function:
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A; Cross-references: UNIPROT: P10845; GB:M30196; NID:g144864; PIDN:AAA23262.1; PID:g144865
A; Cross-references: UNIPROT: P10845; GB:M30196; NID:g144864; PIDN:AAA23262.1; PID:g144865
A; Experimental source: strain 62A, subtype A
R; Thompson, D.E.; Brehm, J.K.; Oultram, J.D.; Swinfield, T.J.; Shone, C.C.; Atkinson, T. Bur. J. Biochem. 189, 73-81, 1990
A; Title: The complete amino acid sequence of the Clostridium botulinum type A neurotoxin A; Reference number: S09492; MUID:90235864; PMID:2185020
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R;Betley, M.J.; Somers, E.; DasGupta, B.R.
Bochem. Biophys Res. Commun. 162, 1388-1395, 1989
A;Title: Characterization of botulinum type A neurotoxin gene: delineation of the N-term A;Reference number: A33401; MUID:89350959; PMID:2669749
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NyAlternate names: botulinum neurotoxin type A
C;Species: Clostridium botulinum
C;Date: 31-Mar-1993 #sequence revision 31-Mar-1993 #text change 09-Jul-2004
C;Accession: A35294; S09492; S68220; A33401, A53884; A60025; A27000
R;Binz, T.; Kurazono, H.; Wille, M.; Frevert, J.; Wernars, K.; Niemann, H.
A;Ebinz, T.; Rurazono, H.; Wille, M.; Prevert, J.; Wernars, K.; Niemann, H.
A;Title: The complete sequence of botulinum neurotoxin type A and comparison with other A;Reference number: A35294; WUID:90264400; PMID:2160960
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                                                                                                                                                                                                                                                                  neurofoxin - Clostridium botulinum
C;Species: Clostridium botulinum
C;Date: 07-Oct-1994 #sequence_revision 01-Dec-1995 #text_change 16-Jul-1999
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A;Residues: 1, 'Q',3-26,'V',28-1296 <THO>
A;Residues: 1, 'Q',3-26,'V',28-1296 <THO>
A;Cross-references: ENBL:X52066; NID:g40381; PIDN:CAA36289.1; PID:g40382
A;Experimental source: NCTC 2916
B;Pujita, R.; Pujinaga, Y.; Inoue, K.; Nakajima, H.; Kumon, H.; Oguma, K.
PEBS Lett. 376, 41-44, 1995
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930 YQNFSISFWVRIPK
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Best Local Similarity
Matches 8; Conserv
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A;Molecule type: DNA
A;Residues: 1-35 <BET>
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A; Residues: 1-12 <FUJ>
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C; Species: Clostridium botulinum
C; Species: Clostridium botulinum
C; Date: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 09-Jul-2004
C; Date: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 09-Jul-2004
C; Maccession: 140631; 848103; 848104; 836015
R; Hutson, R.A.; Collins, M.D.; East, A.K.; Thompson, D.E.
A; Microbiol. 28, 101-110, 1994
A; Title: Nucleotide sequence of the gene coding for non-proteolytic Clostridium botulinum A; Reference number: 140631; MUID: 94122659; PMID: 7764370
A; Accession: 140631
A; Moliniary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-1291 -RESS
A; Residues: 1-1291 -RESS
A; Residues: 1-1291 -RESS
A; Cross-references: UNIPRO: Bast, A.K.
J; Clin. Microbiol. 31, 2255-2262, 1993
A; Richerence number: 848103; MUID: 94013372; PMID: 8408842
A; Recence number: 848103
A; Accession: 148103
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C;Species: Clostridium botulinum
C;Date: 14-Jul-1995 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S48106
R;Campbell, K.D.; Collins, M.D.; East, A.K.
A;Clin. Microbiol. 31, 2255-2262, 1993
A;Title: Gene probes for identification of the botulinal neurotoxin gene and specific id A;Reference number: S48106
A;Accession: S48106
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A;Residues: 634-843, T',845,'N',847-994 <CAM2>
A;Cross-references: EMBL:X70819; NID:g407780; PIDN:CAA50150.1; PID:g407781
A;Experimental source: non-proteolytic strain Eklund 2B (Colworth 229)
C;Comment: Botulinum neurotoxin type B in these strains may posses a capable catalytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A Status: preliminary; nucleic acid sequence not shown; translation not shown A; Molecule type: DNA A; Molecule type: DNA A; Molecule type: DNA A; Molecule type: DNA B; Molecule type: DNA B; Molecule type: DNA B; Molecule type: DNA CAASONA CAMIS A; Cross-reference EMBL: X70814; NID:9407779; PIDN:CAASON45.1; PID:9407779 A; Experimental source: non-proteclytic strain 21298 (Scott) A; Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1993
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;Keywords: metalloprotein; neurotoxin; transmembrane protein; zinc
;2-441/Product: botulinum neurotoxin type B light chain #status predicted <LGHT>
;442-1291/Product: botulinum neurotoxin type B heavy chain #status predicted <HVY>
;230,234/Binding site: zinc (His) #status predicted
                                                                                                                                                                              non-proteolytic botulinum neurotoxin type B precursor - Clostridium botulinum
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Pred. No. 0.38;
4; Mismatches
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A; Status: preliminary
A; Molecule type: procein
A; Residues: 2-16 < SCH1>
A; Residues: 2-16 < SCH1>
A; Residues: 2-16 < SCH1>
A; Residues: 2-17 < SCH1>
A; Residues: 2-17 < SCH1>
A; Residues: 2-17 < SCH1>
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A; Residues: 2-17 < SCH1>
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A; Residues: 2-17 < SCH1>
A; Residues: 2-18 < SCH1>
A; Residues: 2-18 < SCH1>
A; Residues: 442-459 < SCH1>
A; Residues: 442-459 < SCH1>
A; Residues: 452-459 < SCH1>
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A; Residues: 452-459 < SCH1>
A; Reference number: S27125; MUID:93063293; PMID:1331807
A; Title: Tetanus and botulinum neurotoxins inhibit neurotransmitter release from cholinergic synap C; Comment: Boundarion
C; Comment: Botulinum neurotoxins inhibit neurotransmitter release from cholinergic synap A; Gene: bont/b
A; Gene: bont/b
C; Reywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc C; Superfamily: tetanus toxin B iight chain #status experimental cLGH7>
F; 220,234/Binding site: zinc (His) #status predicted
F; 231/Active site: Glu #status predicted
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A/Status: nucleic acid sequence not shown
A/Mocession: A42871
A/Status: nucleic acid sequence not shown
A/Mocelcule type: mRNA
A/Residues: 1-313,'S',315-451 «KUR»
A/Residues: 1-313,'S',315-451 «KUR»
A/Note: sequence extracted from NCBI backbone (NCBIP:109365)
B/Dosdupta, B.R.; Datta, A.
Biochimie 70, 811-817, 1988
A/Title: Botulinum neurotoxin type B (strain 657): partial sequence and similarity with
A/Reference number: S07155; MUID:89000987; PMID:3139097
A/Accession: S07155
A/Molecule type: protein
A/Accession: S08662
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A; Molecule type: DNA
A; Residues: 634-994 cGMA
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A; Residues: 634-994 cGMA
A; Cross-references: EMBL:X70817; NID:9407782; PIDN:CAA50148.1; PID:9407783
A; Experimental source: proteolytic type B, strain NCTC 7273
A; Experimental source: proteolytic type B, strain NCTC 7273
B; Szabo, E.A.; Pemberton, J.M.; Desmarchelier, P.M.
A; Szabo, E.A.; Pemberton, J.M.; Desmarchelier, P.M.
A; Reference number: S21575
A; Reference number: S21575
A; Reference number: S21575
A; Reference number: BNA
A; Reference number: DNA
A; Residues: 36-217, G', 219-224, S', 226-246 <SZA>
A; Residues: 36-217, G', 219-224, S', 226-246 <SZA>
A; Residues: 36-217, G', 219-224, S', 226-246 <SZA>
A; Residues: 36-217, G', 219-224, S', 226-246 <SZA>
A; Residues: 36-217, G', 219-224, S', 226-246 <SZA>
A; Residues: 36-217, G', 219-224, S', 226-246 <SZA>
A; Runarono, H:, Mochida, S.; Binz, T.; Eisel, U.; Quanz, M.; Grebenstein, O.; Wernars, N.
A; Biol. Chem. 267, 14729, 1992
A; Title: Minimal essential domains specifying toxicity of the light chains of tetanus to
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Pred. No. 0.38;
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64.3%;
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Best Local Similarity
Matches 9; Conserv
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Gaps

; 0

Length 367;

DB 2;

50.0%; Score 56;

C; Keywords: neurotoxin

Query Match

| :|:||||:||| 923 FLDFSVSFWIRIPK 936 1 FUNFTVSFWLRVPK 14

typ

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A;Residues: 1-176, K', 178-197, C', 199-339, R', 341-772, I', 774-962, FE', 965-966, R', 968-8-700 and a source: EMBL:X62089; NID:g40393; PIDN:CAA43999.1; PID:g40394
A;Cross-references: EMBL:X62089; NID:g40393; PIDN:CAA43999.1; PID:g40394
B;Experimental source: Extain Beliga
R;Experimental source: Extain Beliga
R;Experimental source: H; Wille, M.; Frevert, J.; Wernars, K.; Niemann, H.
J. Biol. Chem. 265, 9153-9158, 1990
A;Title: The complete sequence of botulinum neurotoxin type A and comparison with other A;Reference number: A35294; MUID:90264400; PMID:2160960
A;Accession: B35294
A;Status: not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A, Molecule type: protein.

A; Residues: 420-427 < Climb.

A; Residues: 420-427 < Climb.

A; Residues: 420-427 < Climb.

A; Roberimental source: strain Beluga

A; Note: this fragment was generated by proteolysis with Lys-C rather than with trypsin

C; Comment: The olsotridial neurotoxins are highly potent protein toxins that inhibit ner

C; Comment: The heavy chain mediates the binding of toxin to cell receptors while the lic; Superfamily: tetanus toxin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Modecule type: DNA
A; Residues: 1-176, 78', 178-252 <BIN>
A; Residues: 1-176, 78', 178-252 <BIN>
A; Experimental source: strain Beluga
B; Gimenez, J.A.; DasGupta, B.R.
Biochimie 72, 213-217, 1990
A; Title: Botulinum neurocoxin type E fragmented with endoproteinase Lys-C reveals the A; Reference number: A60027; MUID: 90344918; PMID: 2116911
A; Accession: A60027
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A; CTOSS-references: EMBL:X70815; NID:g407786; PIDN:CAA50146.1; PID:g407787
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1993
R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R.
Biochem. Biophys. Res. Commun. 183, 107-113, 1992
A; Title: Sequences of the botulinal neurotoxin E derived from Clostridium botulinum t
A; Reference number: JH0256; MUID:92181428; PMID:1543481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Keywords: neurotoxin
F;1-422/Product: botulinum neurotoxin type E light chain #status predicted <LCH>
F;423-1252/Product: botulinum neurotoxin type E heavy chain #status predicted <HCH>
F;412-426/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         botulinum neurotoxin type A - Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Accession: 1404645
R;Willems, A.; East, A.K.; Lawson, P.A.; Collins, M.D.
Res. Microbiol. 144, 547-556, 1993
A;Title: Sequence of the gene coding for the neurotoxin of Clostridium botul
A;Reference number: 140645; MUID:94143603; PMID:8310180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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A;Molecule type: DNA
A;Residues: 1-1296 <RES>
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Pred. No. 0.79;
5; Mismatches
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Similarity 53.8%;
7; Conservative
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YENFSTSFWIKIPK 951
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912 YKNFSISFWVRIP 924
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les 7; Conserv
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A; Residues: 1-1222 «WHE>
A; Crambell: K.D.; Collins, M.D.; East, A.K.
A; Crambell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A; Title: Gene probes for identification of the botulinal neurotoxin gene and specific id
A; Reference number: S48103; MUID:94013372; PMID:8408542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A, Experimental source: strain BL6340
C, Comment: The clostridial neurotoxins are toxins that inhibit neurotransmitter release C, Comment: The heavy chain mediates the binding of toxin to cell receptors while the lig C, Superfamily: tetanus toxin
C, Superfamily: tetanus toxin
C, Keywords: neurotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Clostridium butyricum
C;Species: O-Jul-1904 #sequence_revision 15-May-1998 #text_change 09-Jul-2004
C;Accession: JH0256; S16145
R;Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R.
Biochem. Blopphys. Res. Commun. 183, 107-113, 1992
A;Title: Sequences of the botulinal neurotoxin E derived from Clostridium botulinum type
A;Reference number: JH0256; MUID:92181428; PMID:1543481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status: nucleic acid sequence not shown
A;Molecule type: DNA
A;Residues: 1-27, E', 29-1251 - 60U>
A;Residues: 1-27, E', 29-1251 - 60U>
A;Cross-references: UNIPROT:P30995, EMBL:X62088; NID:g40379
A;Cross-references: strains ATCC 43181 and ATCC 43755
B;Experimental source: strains ATCC 43181 and ATCC 43755
B;Fujii, N.; Kimura, K.; Yashiki, T.; Indoh, T.; Murakami, T.; Tsuzuki, K.; Yokosawa, N. Gen. Microbiol. 137, 519-525, 1991
A;Title: Cloning of a DNA fragment encoding the 5'-terminus of the botulinum type E toxi
A;Reference number: S16145; MUID:91237316; PMID:2033376
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A; Residues: 1-229, 'M', 231-252 <FUJ>
A; Cross-references: EMBL:X53180; NID:940407; PIDN:CAA37321.1; PID:940408
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                                                         53.8%;
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297 YKNFSISFWVRIP 309
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YKNFSISFWVRIP 924
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C;Species: tomato spotted wilt virus
C;Species: tomato spotted wilt virus
C;Species: 10-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 09-Jul-2004
C;Accession: J00547
R;de Haan, P.; Wagemakers, L.; Peters, D.; Goldbach, R.
J; Gen. Virol. 71, 1001-1007, 1990
A;Title: The S RNA segment of tomato spotted wilt virus has an ambisense character.
A;Reference number: J00547, MUID:90264829; PMID:1693160
A;Reference number: J00547, MUID:90264829; PMID:1693160
A;Residues: 1-464 <DEH>
A;Molecule type: genomic RNA
A;Residues: 1-464 <DEH>
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A;Residues: 1-464 <DEH
A;Residues: 1001-1004
                                                                                                                                                                          C;Species: Impatiens necrotic spot virus
C;Species: Impatiens necrotic spot virus
C;Date: 22-Nov-1993 #sequence_revision 01-Dec-1995 #text_change 09-Jul-2004
C;Date: 22-Nov-1993 #sequence_revision 01-Dec-1995 #text_change 09-Jul-2004
C;Accession: $23.58
R;de Haan, P:; de Avila, A.C.; Kormelink, R.; Westerbroek, A.; Gielen, J.J.L.; Peters, D
FEBS Lett. 306, 27-32, 1992
A;Title: The nucleotide sequence of the S RNA of Impatiens necrotic spot virus, a novel
A;Reference number: $23158; MUID:92331780; PMID:1385787
A;Accession: $23158
A;Accession: $23158
A;Accession: S23158
A;Accession: S23158
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C;Species: tomato spotted wilt virus
C;Decies: tomato spotted wilt virus
C;Decies: 10-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: JQ0994
R;Maiss, E.; Ivanova, L.; Breyel, E.; Adam, G.
R;Maiss, E.; Ivanova, L.; Breyel, E.; Adam, G.
A;Description: Cloring and sequencing of the S RNA from a Bulganan isolate of tomato & A;Reference number: JQ0984
A;Accession: JQ0984
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-467 <a href="Mailto:MAIL">MAIL</a>
A;Cross-references: UNIPROT:P26003
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64.3%; Pred. No. 1.3;
cive 3; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 NN--FTVSFWLRVPKVSASH 19
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Best Local Similarity 45.0°
Matches 9; Conservative
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Matches 9
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Coxin, nontoxic component - Clostridium botulinum phage (type C)
C;Species: Clostridium botulinum phage
C;Species: Clostridium botulinum phage
C;Species: T-Jul-1992 #sequence revision 17-Jul-1992 #text_change 02-Jun-2003
C;Accession: J01467; P00293; $22165
R;Tsuzuki, K.; Kimura, K.; Pujii, N.; Yokosawa, N.; Oguma, K.
Biochem. Biophys. Res. Commun. 183, 1273-1279, 1992
A;Title: The complete nucleotide sequence of the gene coding for the nontoxic-nonhemaggl.
A;Reference number: J01467; MUID:92231894; PMID:1567404
A;Accession: J01467
A;Accession: J01467
A;Residues: 1-1196 <TSU>A;Residues: 1-1196 <TSU>A;Cross-references: EMBL:X62389; NID:9558175; PIDN:CAA44262.1; PID:g40389
A;Experimental source: strain C-Stockholm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Accession: PQ0297
A;Molecule type: protein
A;Residues: 1-20 - STS2-
C;Comment: This noncoxic component is a constituent of 168(500K) toxin with two other cc
C;Superfamily: tetanus toxin
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A;Cross-references: UNIPROT:Q38197; EMBL:X72793; NID:g516171; PIDN:CAA51312.1; PID:g51617
A;Cross-references: UNIPROT:Q38197; EMBL:X72793; NID:g516171; PIDN:CAA51312.1; PID:g51617
A;Experimental source: scrain C 468
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, May 1993
C;Superfamily: tetanus toxin
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A,Variety: strain C 468
A,Variety: strain C 468
C,Date: 19-Mar-1997 #sequence_revision 06-Jun-1997 #text_change 09-Jul-2004
C,Date: 19-Mar-1997 #sequence_revision 06-Jun-1997 #text_change 09-Jul-2004
C,Accession: S46430; S49106
R;Hauser, D.; Exlund, M.W.; Boquet, P.; Popoff, M.R.
Mol. Gen. Genet. 243, G31-640, 1994
A;Title: Organization of the botulinum neurotoxin C1 gene and its associated A;Accession: S46430
A;Accession: S46430
A;Status; nucleic_acid sequence not shown; translation not shown
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A;Gene: NS
A;Map position: segment S
C;Superfamily: tomato spotted wilt virus nonstructural protein ]
C;Keywords: nonstructural protein
                                                                                                                                                 Length 467;
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                                                                                                                                              Score 52; DB 1;
Pred. No. 1.3;
3; Mismatches
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Pred. No. 5;
1; Mismatches
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80.0%; Pred. No. 5;
ive 1; Mismatches
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80.0%;
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Similarity 64.3%;
9; Conservative
                                                                                                                                                                                                                                                                                                  243 SHFKLSLWLRVPKV 256
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Best Local Similarity 80.vv,
8; Conservative
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Matches 8; Conservative
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Best Local Similarity
Matches 9; Conserv
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A; Residues: 1-1285 <MOR>
A; Residues: 1-1285 <MOR>
A; Cross-references: EMBL:D38442; NID:g1374775; PIDN:BAA07477.1; PID:g1374776
A; Cross-references: EMBL:D38442; NID:g1374775; PIDN:BAA07477.1; PID:g1374776
C; Comment: The clostridial neurotoxin mediates the binding of toxin to the presynaptic memb disulfide bond. The heavy chain mediates the binding of toxin to the presynaptic memb C; Superfamily: tetanus toxin
C; Reywords: disulfide bond; neurotoxin; transmembrane protein
F; P; Product: botulinum neurotoxin type Dsa light chain #status predicted <MATI>
F; 448-1285/Product: botulinum neurotoxin type Dsa heavy chain #status predicted <MATI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Detulinum neurotoxin type CI precursor - Clostridium botulinum (type C, strain c-st) C; Species: Clostridium botulinum C; Species: Clostridium botulinum C; Species: Clostridium botulinum C; Date: 10-Mar-1994 #sequence revision 07-Apr-1994 #sext_change 09-Jul-2004 C; Date: 10-Mar-1994 #sequence revision 07-Apr-1994 #sequence C; Date: 10-Mar-1994 #sequence C; Date: 10-Mar-1994 #sequence C; Date: 10-Mar-1994 #sequence Of Clostridium Dotulinum CI neurotoxin. Notcled Acids Res. 18, 4924, 1990 A; Title: Nucleotide Sequence Of Clostridium Dotulinum CI neurotoxin. A; Reference number: 11291; MUID:90370487; PMID:2204031 A; Retus: preciminary A; Molecule type: DNA A; Residues: 1-84, P; Mac-1291 A; Murakami, T: Indoh, T:; Yokosawa, N:; Takeshi, K; Kimura, K.; Fujii, N.; Tauzuki, K.; Murakami, T:; Indoh, T.; Yokosawa, N:; Takeshi, K; Biochem: Biophys. Res. Commun. 171, 1304-1311, 1990 A; Title: The complete nucleotide sequence of the gene coding for botulinum type C-1 tox A; Reference number: A53396; MUID:9104998; PMID:222445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: DNA
A;Residues: 1-669, R2, 671-1291 <TS1>
TSTSUZULI, K.; Kimura, K.; Fujii, N.; Yokosawa, N.; Oguma, K.
Submitted to the EMBL Data Library, December 1991
A;Description: Nucleotide sequence of the gene for one of the components of hemagglutin
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A;Molecule type: DNA
A;Molecule type: DNA
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-1291 <TS2>
A;Cross-references: EMBL:X62389; NID:g558175; PIDN:CAA4263.1; PID:g40390
R;Kimura, K.; Fujii, N.; Tsuzuki, K.; Murakami, T.; Indoh, T.; Yokosawa, N.; Oguma, K.
A;Kimura, K.; Fujii, N.; Tsuzuki, K.; Murakami, T.; Indoh, T.; Yokosawa, N.; Oguma, K.
A;Title: Cloning of the structural gene Clostridium botulinum type C-1 toxin and wh.
A;Reference number: A49777; MUID:91282468; PMID:2059039
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                                                                                                                                                                                                                                                                                               Score 48; DB 2; Length 1285;
Pred. No. 17;
6; Mismatches 2; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2; Indels
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                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 42.9%;
Matches 6; Conservative
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Best Local Similarity 42.9%;
Matches 6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 FNNFTVSFWLRVPK 14
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C;Superfamily: tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A, Reference number: S22163
A, Accession: S22166
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Keywords: neurotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
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R;Moriishi, K.; Koura, M.; Abe, N.; Fujii, N.; Fujinaga, Y.; Inoue, K.; Ogumad, K.
Biochim. Biophys. Acta 1307, 123-126, 1996
A;Title: Mosaic structures of neurotoxins produced from Clostridium botulinum types C an A;Reference number: S70582; MUID:96283801; PMID:8679691
A;Accession: S70582
A;Accession: Grid sequence not shown
                                                                                                                                                                                                                        Rigatiung, S.
submitted to the EMBL Data Library, October 1998
submitted to the EMBL Data Library, October 1998
Appearantenment: 221358
A; Reference number: 221358
A; Reference number: 231358
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Residues: preliminary; translated from GB/EMBL/DDBJ
A; Residues: 1-276 <GAT>
A; Residues: 1-276 <GAT>
A; Cross-references: UNIPROT: O9TZKS; EMBL: AF098987; PIDN: AAC67432.1; GSPDB: GN00020; CESP:
A; Experimental source: strain Bristol N2; clone F40H3
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C; Species: Arabidopsis thaliana (Mouse-ear cress)
C; Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 09-Jul-2004
C; Accession: T47446
R; Jordan, N.; Bangert, S.; Wiedelmann, R.; Voss, H.; Unseld, M.; Mewes, H.W.; Lemcke, Submitted to the Protein Sequence Database, February 2000
A; Reference number: Z24467
A; Accession: T47446
A; Status: preliminary
A; Mesidues: 1-504 «JOR»
A; Residues: 1-504 «JOR»
A; Residues: 1-504 «JOR»
A; Residues: 1-504 «JOR»
A; Experimental source: cultivar Columbia; BAC clone T18B22
C; Genetics:
A; Map position: 3
A; Note: T18B22.110
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                                     hypothetical protein F40H3.5 - Caenorhabditis elegans
C,Species: Caenorhabditis elegans
C,Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
C,Accession: T33493
R,Gattung, S.
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Pred. No. 6.3;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Map position: 2
A;Introns: 49/2; 109/3; 154/3; 227/3; 271/1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE 21
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ilarity 41.7%;
Conservative 6
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Best Local Similarity
Matches 10; Conserv
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Gaps

8

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C,Genetics:
A,Gene: F14B6.6
A,Map position: 1
C,Superfamily: Caenorhabditis elegans hypothetical protein T09F5.1
                                                                                                                                                                           Query Match 42.0%; Score 47; DB 2; Length 359; Best Local Similarity 32.0%; Pred. No. 6.4; Matches 8; Conservative 6; Mismatches 3; Indels
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Job time : 19.0833 secs
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Cybate: 10-May-2001 #sequence_revision 10-May-2001 #text_change 09-Jul-2004
Cybatesion: F87937
Ryanonymous The C. elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
AyTttle: Genome sequence of the nematode C. elegans: a platform for investigating biolog AyExference number: A7500; MUID:99069613; PMID:9851916
AyOcte: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and AyAccession: F87937
AyStatus: preliminary
AyMolecule type: DNA
AyRemidues: 1-359 <STO>
AyRemidues: 1-359 <STO>
AyCross-references: UNIPROT:062165; GB:chr_I; PIDN:CAB04109.1; PID:g3875883; GSPDB:GN00d
                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-1291 <HAU>
A; Residues: 1-1291 <HAU>
A; Residues: 1-1291 <HAU>
A; Cross-references: UNIPROT:Q93HT3; EMBL:X72793; NID:g516171; PIDN:CAA51313.1; PID:g5161
A; Experimental source: strain C 468
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, May 1993
C; Superfamily: tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Doculinum neurotoxin type D - Clostridium botulinum
C;Species: 18-Feb-1994 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S11455
R;Binz, T.; Kurazono, H.; Popoff, M.R.; Eklund, M.W.; Sakaguchi, G.; Kozaki, S.; Kriegle
R;Binz, T.; Kurazono, H.; Popoff, M.R.; Eklund, M.W.; Sakaguchi, G.; Kozaki, S.; Kriegle
R;Binz, T.; Kurazono, H.; Popoff, M.R.; Eklund, M.W.; Sakaguchi, G.; Kozaki, S.; Kriegle
R;Binz, T.; Kurazono, H.; Popoff, M.R.; Eklund, M.W.; Sakaguchi, G.; Kozaki, S.; Kriegle
A;Fitle: Nucleotide sequence of the gene encoding Clostridium botulinum neurotoxin type
A;Fitle: Nucleotide sequence of the gene encoding Clostridium botulinum neurotoxin type
A;Fitle: Nucleotide sequence of the gene encoding Clostridium botulinum neurotoxin type
A;Fitle: Nucleotide sequence of the gene encoding Clostridium botulinum neurotoxin
A;Residues: 1-1276 *BIN>
A;Residues: 1-1276 *BIN>
A;Residues: 1-1276 *BIN>
C;Superfamily: tetanus toxin
                                           NiAlternate names: BONT/CI protein
Cispecies: Clostridium botulinum phage 1C
Cispecies: Clostridium botulinum phage 1C
Cispecies: Clostridium botulinum phage 1C
Cispecies: 19-Mar-1997 #sequence_revision 06-Jun-1997 #text_change 09-Jul-2004
Ciscession: 846431; 849107
RiHauser, D.; Eklund, M.W.; Boquet, P.; Popoff, M.R.
RiHauser, D.; Eklund, M.W.; Boquet, P.; Popoff, M.R.
Altitle: Organization of the botulinum neurotoxin Cl gene and its associated non-toxic A; Reference number: 846426; MuID:94301293; PMID:8028579
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C;Species: Caenorhabditis elegans
C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 09-Jul-2004
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                  - Clostridium botulinum phage 1C (strain C 468)
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Best Local Similarity 42.9°
Matches 6; Conservative
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Best Local Similarity 40.99
Matches 9; Conservative
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tomato tomato tomato tomato

tomato spot tomato spot tomato spot

clostridium tospovirus

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Clostridium tetani.
Batceria; Firmicutes, Clostridia, Clostridiales, Clostridiaceae,
Clostridium.
VCBI_TaxID=1513;
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
NCBI_TaxID=1513;
                     Baco99990

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN=20886;
He H.J., Shi H.J., He Z.Y., Yuan Q.S., Wu X.F.;
Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF154281; AAF73267.1;
InterPro; IPR008985; Conalike lec_gl.
InterPro; IPR011065; Kunitz_like.
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Shumit Z., Dianliang L.;
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL, AF1999424, AAR7-2564-2;
GO, GO:0008233; F:peptidase activity; IEA.
GO, GO:0009405; P:pathogenesis; IEA.
GO, GO:000508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR011591; Botulinum.
InterPro; IPR008985; ConA_like_lec_g1.
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SEQUENCE 451 AA; 51823 MW; 69A8C5F030E6CD8E CRC64;
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QBJXJ9
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O37367
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BXCN_CLOBO
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Q8JVL0
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  Query Match
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Q45894 clostridium
Q9zaj5 clostridium
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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                       GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries
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2: uniprot_trembl:*
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Maximum DB seq length: 2000000000
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13-AUG-1987 (Rel. 05, Last sequence update)
01-0CT-2004 (Rel. 45, Last annotation update)
Tetanus toxin precursor (EC 3.4.24.68) (Tentoxylysin) [Contains:
Tetanus toxin light chain (Tetanus toxin chain L); Tetanus toxin heavy
chain (Tetanus toxin chain H)].
                                                                                                                                                                                                                                                                                                                                                                                                            PLASMID=75 Kbp;
MEDLINE=87053814; PubMed=3536478;
Bisel U., Jarausch W., Goretzki K., Henschen A., Engels J., Weller U.,
Hudel M., Habermann E., Niemann H.;
"Tecanus toxin: primary structure, expression in E. coli, and homology
with botulinum toxins.";
                                                                                                                                              Gaps
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J. Bacteriol. 165:21-27(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of
                                                                                                                                                                                                                                                                                                                        Name=tetX; OrderedLocusNames=ctp60;
Clostridium tetani.
Plasmid pE88, and Plasmid 75 Kbp.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=Massachusetts / E88; PLASMID=pE88;
MEDLINE=22457253; PubMed=12552129; DOI=10.1073/pnas.0335853100;
Brueggemann H., Baeumer S., Fricke W.F., Wiezer A., Liesegang H.
Decker I., Herzberg C., Martinez-Arias R., Merkl R., Henne A.,
Gottschalk G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "The genome sequence of Clostridium tetani, the causative agent tetanus disease.",
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                                                                                                                       Length 1310;
                                                                                                 1310 AA; 150316 MW; 9EADDC914418E450 CRC64;
                                                                                                                                           Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proc. Natl. Acad. Sci. U.S.A. 100:1316-1321(2003).
                                                                                                                     100.0%; Score 112; DB 2; 100.0%; Pred. No. 2.6e-09;
                                                                                                                                                                                                                                       PRT; 1314 AA.
InterPro; IPR011065; Kunitz like.
InterPro; IPR000395; Peptidase_M27.
InterPro; IPR006035; Pept M Zn_BS.
Pfam; PF01742; Peptidase_M27; I.
PRINTS; PR00760; BONTOXILYSIN.
ProDom; PD001963; Botulinum; 1.
PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_I.
                                                                                                                                          Mismatches
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                                                                                                                                                                            948 FNNFTVSFWLRVPKVSASHLE 968
                                                                                                                                                             1 FNNFTVSFWLRVPKVSASHLE 21
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MEDLINE=87040747; PubMed=3774547;
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MEDLINE=86085672; PubMed=3510187;
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                                                                                                                                           Conservative
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Suropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  neurotoxin.";

Nat. Struct. Biol. 4:788-792(1997).

-I. FUNCTION: Tetamus toxin acts by inhibiting neurotransmitter
release. It binds to peripheral neuronal synapses, is internalized
and moves by retrograde transport up the axon into the spinal cord
where it can move between postsynaptic and presynaptic neurons. It
inhibits neurotransmitter release by acting as a zinc
endopeptidase that catalyzes the hydrolysis of the 76-Gln-|-Phe-77
bond of synaptobrevin-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synaptobrevin 2. COPACTOR: Binds 1 zinc ion per subunit (By similarity). COPACTOR: Binds 1 zinc ion per subunit (By similarity). SUBUNIT: The precursor polypeptide is subsequently cleaved to SUBUNIT: I and H. These remain linked by a disulfide bridge and are non-toxic after separation. MISCELLANEOUS: The C-terminus of the heavy chain binds to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTIFICATION OF SUBSTRATE.
MEDIANE=39063299; PubMed=1331807;
Schiavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P.,
Dasgupta B.R., Montecucco C.;
"Tetanus and botulinum-B neurotoxins block neurotransmitter release by
Kriegistein K., Henschen A., Weller U., Habermann E.; "Arrangement of disulfide bridges and positions of sulfhydryl groups in tetanus toxin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=97475217; PubMed=9334741;
Umland T.C., Wingert L.M., Swaminathan S., Furey W.F., Schmidt J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Tetanus toxin is a zinc protein and its inhibition of neurotransmitter ralease and protease activity depend on zinc."; EMBO J. 11:3577-3583(1992).
                                                                                                                                                                                                     MEDLINE-92037649; PubMed-1935979;
Krieglatein K.G., Henschen A.H., Weller U., Habermann E.;
"Limited proteolysis of tetanus toxin. Relation to activity and
identification of cleavage sites.";
Eur. J. Biochem. 202:41-51(1991).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=93010948; PubMed=139558;
Schiavo G., Poulain B., Rossetto O., Benfenati F., Tauc
Montecucco C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS) OF 874-1314.
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SIMILARITY: Belongs to peptidase family M27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       proteolytic cleavage of synaptobrevin.";
                                                                                                    Eur. J. Biochem. 188:39-45(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                 IDENTIFICATION AS ZINC-PROTEASE
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EMBL; X06214; CAA29564.1; -.
EMBL; AF528097; AA037454.1; -.
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IDIL; X.ray; A=874-1314.

IFV2; X.ray; A=843-1314.

IFV3; X.ray; A/B=843-1314.
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1AF9; X-ray; @=863-1314.
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Truntleotide sequence of the gene coding for Clostridium barati type F

Truntleotide sequence of the gene coding for Clostridium barati type F

Truntleotide sequence of the gene coding for Clostridial

Truntleotide comparison with other clostridial neurotoxins.";

Truntleotide Canada329.1;

Truntleotide Canada329.1;

Truntleotide Canada329.1;

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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
NCBI_TaxID=1561;
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(y)9AH9;
(b)-UUL-2004 (TrEMBLrel. 27, Created)
(b)-UUL-2004 (TrEMBLrel. 27, Last annotation update)
(b)-UUL-2004 (TrEMBLrel. 27, Last annotation update)
Botulinum neurotoxin type F (Fragment).
Botulinum botulinum.
Clostridium botulinums; Clostridia, Clostridiaceae;
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MEDLINE=93252228; PubMed=8486245;
Thompson D.E., Hutson R.A., East A.K., Allaway D., Collins M.D.
Richardson P.T.;
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Last sequence update)
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Pred. No. 2.6e-09;
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Pred. No. 0.48;
4; Mismatches
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PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
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Best Local Similarity 64.3%;
Matches 9; Conservative
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922 YQNFSVSFWVRIPK 935
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01-NOV-1996 (TYEMBLTEL. 0)
01-NAR-2004 (TYEMBLTEL. 26
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Best Local Similarity
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DR InterPro; IPR008985; Kunitz_like lec_gl.

InterPro; IPR008985; Kunitz_like.

InterPro; IPR010055; Kunitz_like.

InterPro; IPR006025; Pept_M_Zn_BS.

InterPro; IPR006025; Pept_M_Zn_BS.

InterPro; IPR006025; Pept_M_Zn_BS.

InterPro; IPR006025; Pept_M_Zn_BS.

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Query Match
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                                                           Campbell K., East A.K., Collins M.D.; "Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F."; J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=94013372; PubMed=8408542; Caphins M.D.; Campbell K., East A.K., Collins M.D.; Campbell K., Edidntification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F."; J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN=TYPE F / ATCC 23387;
MEDLINE=93012902; PubMed=1398040;
East A.K., Richardson P.T., Allaway D., Collins M.D., Roberts T.A.,
Thompson D.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           East A.K., Collins M.D.;
"Conserved structure of genes encoding components of botulinum neurotoxin complex M and the sequence of the gene coding for the nontoxic component in nonproteolytic Clostridium botulinum type FCurr. Microbiol. 29:69-77(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Sequence of the gene encoding type F neurotoxin of Clostridium botulinum.";
                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                              01-JUL-1993 (Rel. 26, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Botulinum neurotoxin type F precursor (EC 3.4.24.69) (BONT/F)
                                                                                                                                                                                                                                      54.5%; Score 61; DB 2; Length 366; 57.1%; Pred. No. 0.19; tive 5; Mismatches 1; Indels
                                                                                                                       STRAIN-type F;
Campboll K.D.;
Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; X70821; CAA50152.1;
                                                                                                                                                                                                      366 AA; 43136 MW; 45A132B235D7E640 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMS Microbiol. Lett. 75:225-230(1992).
                                                                                                                                                               GO; GO:0009405; P:pathogenesis; IEA.
InterPro; IPR008985; ConA_like_lec_gl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 1-64 FROM N.A.
STRAIN-Type F / Hobbs FT10;
MEDLINE-94297488; PubMed-7764998;
                                       STRAIN=type F;
MEDLINE=94013372; PubMed=8408542;
                                                                                                                                                                                                                                                                                                                                                                        01-JUL-1993 (Rel. 26, Created)
                                                                                                                                                                                                                                                                                        : ||::|||:||
297 YONFSISFWVRIPK 310
                                                                                                                                                                                                                                                                             1 FNNFTVSFWLRVPK 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IDENTIFICATION OF SUBSTRATE
                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                            Local Similarity
tes 8; Conserv
                               FROM N.A.
                                                                                                             SEQUENCE FROM N.A.
      NCBI_TaxID=1491;
                                                                                                                                                                                                                                                                                                                                                                                                                (Bontoxilysin F)
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                                                                                                                                                                                     Neurotoxin.
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P30996;
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SEQUENCE
                              SEQUENCE
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A Manualki S., Baumeister A., Binar T., Blasi J., Link B., Cornille F., Roques B., Fykse E.M., Suedhof T.C., Jahn R., Niemann H.;

Roques B., Fykse E.M., Suedhof T.C., Jahn R., Niemann H.;

Roques B., Fykse E.M., Suedhof T.C., Jahn R., Niemann H.;

Rotulinal neurotcoxins and tetanus toxin.";

J. Biol. Chem. 269:12764-12772(1994).

I. FUNCTION: Botulinum toxin acts by inhibiting neurotransmitter release. It binds to peripheral neuronal synapses, is internalized and moves by retrograde transport up the axon into the spinal cord where it can move between postsynaptic and presynaptic neurons. It inhibits neurotransmitter release by acting as a zinc endopeptidase that catalyzes the hydrolysis of the S8-Gln-|-Lys-59 condopeptidase that lamited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. Notested action on small molecule substrates.

I. SUBUNIT: Disulfide-linked heterodimer of a light chain (H). The light chain has the pharmacological activity, while the N and Cterminal of the heavy chain mediate channel cormation and toxin binding, respectively.

I. SUBCELLULAR BOUS: There are seven antigenically distinct forms of condomer of synapsidase family M27.

SIMILARITY: Belongs to peptidase family M27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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R InterPro; IPR000955; ConA like lec_gl.

R InterPro; IPR000355; Peptidase M27.

R InterPro; IPR000355; Peptidase M27.

R InterPro; IPR000525; Peptidase M27.

R PRINTS; PR001742; Peptidase M27; I.

R PRINTS; PR001760; BONTOXILYSIN.

R PRODOM; PD001963; BONTOXILYSIN.

R PRODOM; PS00142; ZINC_PROTEASE; I.

R PROTOR; PS00142; ZINC_PROTEASE; I.

RYDOM; PS00186; BONTOXILYSIN.

R PROTOR; PS00142; ZINC_PROTEASE; I.

MYDROLASE; Metalloprotease; Neurotoxin; Transmembrane; Zinc.

CHAIN 437 1274 Botulinum neurotoxin F heavy-chain.

T ACT_SITE 227 227 Zinc (catalytic) (By similarity).

T ACT_SITE 228 By similarity.

T ACT_SITE 231 Zinc (catalytic) (By similarity).

T DISULPID 429 445 Interchain (Probable).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT; 1278 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; M92906; AAA23263.1; --
EMBL; S73676; AAC60475.1; --
EMBL; X70820; CAA50151.1; --
EMBL; X70816; CAA50147.1; --
PIR; 140813; 140813
PIR; S48109; S48109.
HSSP; Q45894; 151H.
MEROPS; M27.002; --
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930 YQNFSISFWVRIPK 943
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neurotransmitter release by acting as a zinc
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                                                                                                                                                                                                                                                                                                MEROPS; M27.002;
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MEDLINE-94092745; PubMed-8268233;

MEDLINE-94092745; PubMed-8268233;

MEDLINE-94092745; PubMed-8268233;

MEDLINE-94092745; PubMed-8268233;

Nucleotide sequence of the gene coding for Clostridium botulinum with other clostridial neurocoxine.

(Clostridium argentinense) type G neurotoxin: genealogical comparison with other clostridial neurocoxine.

1. FORCTION: Botulinum toxin acts by inhibiting neurotransmitter release. It binds to peripheral neuronal synapses, is internalized and moves by retrograde transport up the axon into the spinal cord where it can move between postsynaptic and presynaptic neurons. It
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                                                         Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium botulinum.
Bacteria, Firmicutes, Clostridia, Clostridiales, Clostridiaceae,
Clostridium.
NCBL_TaxID=1491;
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05-JUL-2004 (Rel. 44, Last annotation update)
Botulinum neurotoxin type G precursor (EC 3.4.24.69) (BONT/G)
                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1278;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                       Elmore M.J., Bodsworth N.J., Whelan S.M., Minton N.P.;
Submitted (AUG-1994) to the EMBL/GenBank/DDBJ databases.
EMBL; X81714; CAA57358.1; -.
EMBL; L35496; AAA23210.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                1278 AA; 147073 MW; A1BE1318431D6918 CRC64;
                                                                                                                 STRAIN=NCTC 10281;
Hutson R.A., Collins M.D.;
Submitted (SEP-1994) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                        GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0009405; P:pathogenesis; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
02-UUL-2004 (TrEMBLrel. 27, Last annotation update)
BONT/F (Neurotoxin type F).
Name=bont/f; Synonyms=bonT/F;
                                                                                                                                                                                                                                                                                                                                                                                                                                      54.5%; Score 61; DB 2; 57.1%; Pred. No. 0.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT; 1296 AA
                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                           InterPro; IPR011591; Boulinum.
InterPro; IPR008885; ConA like lec_gl.
InterPro; IPR001065; Kunitz like.
InterPro; IPR0010395; Peptidase_MZ7.
InterPro; IPR006035; Pept M Zn BS.
Pfam; PF01742; Peptidase_MZ7; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1997 (Rel. 35, Created)
                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PR00760; BONTOXILYSIN
                                                                                                                                                                                                                                                                                                                                                                              ProDom; PD001963; Botulinum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 FNNFTVSFWLRVPK 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                               Clostridium botulinum.
                                                                                                                                                                                                                        PIR; S48110; S48110.
HSSP; Q45894; 1E1H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                               SEQUENCE FROM N.A.
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GO; GO:0008233; F
                                                                                NCBI_TaxID=1491;
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CATALYTIC ACTIVITY: Limited hydrolygis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and a heavy chain (H). The light chain has the pharmacological activity, heavy chain (H). The light chain has the pharmacological activity, formation and coxin binding, respectively.

SUBCELLUNGAR LOCATION: Secreted (By similarity).

MISCELLANEOUS: There are seeven antigenically distinct forms of botulinum neurotoxin: Types A, B, Cl, D, B, F, and G.

SIMILARITY: Belongs to peptidase family M27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | R | MENCPS; | MAY. | UUU4; | L. | |
| R | InterPro; | IPR008995; | ConA like lec_gl. |
| R | InterPro; | IPR001055; | Kunitz_like. |
| R | InterPro; | IPR001055; | Peptidase | M27; |
| R | InterPro; | IPR061025; | Peptidase | M27; |
| R | InterPro; | IPR061025; | Peptidase | M27; | I. |
| R | FAUTYS; | PR00760; | BONTOXILYSIN. |
| R | PRODIOM; | PRODIU1963; | BONTOXILYSIN. |
| R | PROSITE; | PS00142; | ZINC | PROTEASE; | I. |
| R | PROSITE; | PROTEASE; | I. |
| Hydrolase; | Metalloprotease; | Neurotoxin; | Zinc. |
| Hydrolase; | Metalloprotease; | Neurotoxin; | Glight-chain. |
| Hydrolase; | M41 | 1441 | Botulinum neurotoxin | Gheavy-chain. |
| FT | MIT MIT | 1441 | Botulinum neurotoxin | Gheavy-chain. |
| FT | MIT MIT | 229 | Zinc (catalytic) | By similarity). |
| FT | AT_SITE | 233 | Zinc (catalytic) | By similarity). |
| FT | MIT MIT | M41 | M42 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M44 | M
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P10845; P01561; P18639;
01-JUL-1989 (Rel. 11, Created)
01-JUL-1939 (Rel. 26, Last sequence update)
01-OCT-2004 (Rel. 45, Last annotation update)
Botulinum neurotoxin type A precursor (EC 3.4.24.69) (BONT/A)
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium.
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MEDLINE=90235864; PubMed=2185020;
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us-09-806-703a-14.rup

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MEDINE=85285016; PubMed=1896784; Shone C.C., Hambleton P., Melling J.; Shone C.C., Hambleton P., Melling J.; Inactivation of Clostridium botulinum type A neurotoxin by trypsin and purification of two tryptic fragments. Proteolytic action near the COOH-terminus of the heavy subunit destroys toxin-binding activity."; Eur. J. Blochem. 151:75-82(1985).
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MEDLINE=97016817; PubMed=8863443;

East A.K., Bhandari M., Stacey J.M., Campbell K.D., Collins M.D.;

"Organization and phylogenetic interrelationships of genes encoding components of the botulinum toxin complex in proteclytic Clostridium botulinum types A, B, and F: evidence of chimeric sequences in the gene encoding the nontoxic nonhemagglutinin component.";

Int. J. Syst. Bacteriol, 46:1105-1112(1996).
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                                                                                                                 SEQUENCE FROM N.A.,
STRAIN=TYPE A / 62A;
MEDIJINE=90264400; PubMed=2160960;
Binz B., Kuarzono H., Wille M., Frevent J., Wernars K., Niemann H.;
"The complete sequence of botulinum neurotoxin type A and comparison with other clostridial neurotoxins", July other clostridial neurotoxins",
Atkinson T., Melling J., Minton N.P.; "The complete amino acid sequence of the Clostridium botulinum type neurotoxin, deduced by nucleotide sequence analysis of the encoding
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the heavy chain into two
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"Partial amino acid sequence of the heavy and light chains of botulinum neurotoxin type A.";
Biochem. Biophys. Res. Commun. 119:900-904(1984).
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MEDLINE-89024662; PubMed=3178218;
Sathymoorthy V., Dasgupta B.R., Foley J., I Botulinum neurotoxin type A: cleavage of halves and their partial sequences.";
Arch. Biochem. Biophys. 266:142-151(1988).
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MEDLINE=91120847; PubMed=2126206;
Dasgupta B.R., Dekleva M.L.;
"Botulinum neurotoxin type A: sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bite.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=Type A / Hall;
MEDLINE=89350959; PubMed=2669749;
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MEDLINE-96096783; PubMed-8521962;
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MEDLINE=84178501; PubMed=6370252;
                                                                                Eur. J. Biochem. 189:73-81(1990)
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SEQUENCE OF 1-65 FROM N.A.
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heavy chain (H).

-- SUBCELLULAR LOCATION: Secreted.
-- PHARMASCEUTICAL: Available under the name BOTOX (Allergan) for the treatment of strablsmus and blepharospasm associated with dystonia and cervical dystonia. Also used for the treatment of hemifacial spasm and a number of other neurological disorders characterized by abnormal muscle contraction.
-- MISCELLANEOUS: There are seven antigenically distinct forms of botulinum neurotoxin: Types A, B, Cl, D, E, F, and G.
-- SIMILARITY: Belongs to peptidase family M27.
-- SIMILARITY: Belongs to peptidase family M27.
-- DATABASE: NAME-BOTOX product information Web site;
WWW="http://www.botox.com/site/".
-- DATABASE: NAME-Protein Spotlight; NOTE=Issue 19 of February 2002;
WWW="http://www.expasy.org/spotlight/articles/sptlt019.html".
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nat. Struct. Biol. 5:898-902(1998).

-! FUNCTION: Inhibits acetylcholine release. The botulinum toxin binds with high affinity to peripheral neuronal presynaptic membrane, is then internalized by receptor-mediated endocytosis. The C-terminus of the heavy chain (H) is responsible for the adherence of the toxin to the cell surface while the N-terminus mediates transport of the light chain from the endocytic vesicle to the cytosol. After translocation, the light chain (L) hydrolyzes the 197-Gln-|-Arg-198 bond in SNAP-25, thereby blocking neurotransmitter release. Inhibition of acetylcholine release results in flaccid paralysis, with frequent heart or respiratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=98455071; PubMed=9783750;
Lacy D.B., Tepp W., Cohen A.C., Dasgupta B.R., Stevens R.C.;
"Crystal structure of botulinum neurotoxin type A and implications for
                                                                                                                                                                                                                                                                                                                                                                                                                         Binz T., Blasi J., Yamasaki S., Baumeister A., Link E., Suedhof T.C., Jahn R., Miemann H., Memann H., Protecolysis of SNAP-25 by types E and A botulinal neurotoxins."; J. Biol. Chem. 269:1617-1620(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

COFACTOR: Binds 1 zinc ion per subunit: SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and a
                                                                                                72,
                                                                                                                                                                                    identification of SUBSTRATE.
MEDILINE-94063191, PubMed=8243676,
Schiavo G., Santtuci A., Dasgupta B.R., Mehta P.P., Jontes J.,
Benfenati F., Wilson M.C., Montecucco C.;
"Botulinum neurotoxins serotypes A and E cleave SNAP-25 at distinct CCOH-terminal peptide bonds";
FEBS Lett. 335:99-103(1993).
                                                                            Jamenez J.A., DasGupta B.K.;
Bebtulinum type A neurotoxin digested with pepsin yields 132, 97,
45, 42, and 18 kD fragments.";
J. Protein Chem. 12:351-363(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MUTAGENESIS OF GLU-261, PHE-265 AND TYR-365.
MEDLINE=21556941; PubMed=11700044; DOI=10.1006/bbrc.2001.5911;
Rigoni M., Caccin P., Johnson E.A., Montecucco C., Rossetto O.;
"Site-directed mutagenesis identifies active-site residues of the light chain of botulinum neurotoxin type a.";
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                      OF 866-879 AND 1147-1218
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                                                                                                                                                                                                                                                                                                                                                           [13]
IDENTIFICATION OF SUBSTRATE
                                                                       Gimenez J.A., DasGupta B.R.
                   SEQUENCE OF 866
PubMed=8397793;
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STRAIN=type B;
MEDLINE=94013372; PubMed=8408542;
Campbell K., East A.K., Collins M.D.;
Campbell K., Edentification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                                                                                                      Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN-Allergan-Hall A;
MEDLINE-229194, PubMed=14557061;
Abang L., Lin W.J., Li S., Aoki K.R.;
"Complete DNA sequences of the botulinum neurotoxin complex of clostridium botulinum type A-Hall (Allergan) strain.";
EMBL; AF488749; AAQ06331.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52.7%; Score 59; DB 2; Length 1296; ilarity 57.1%; Pred. No. 1.5; Conservative 4; Mismatches 2; Indels
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EMBL; X70814; CAA50145.1; -.
GO; GO:0009405; P:pathogenesis; IEA.
InterPro; IPR008985; ConA_like_lec_gl.
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01-NOV-1996 (TrEMBLrel. 01,
01-OCT-2003 (TrEMBLrel. 25,
                                       938 YENFSTSFWIRIPK 951
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nes 8; Conserv
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Campbell K.D.;
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SEQUENCE
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Q45846;
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                                                                                                                                                              InterPro; IPR000985; ConA like lec_gl.
InterPro; IPR000985; Runitz_like.
InterPro; IPR000985; Peptidase M7.
InterPro; IPR000095; Peptidase M7.
InterPro; IPR000025; Peptidase M7.
InterPro; IPR000025; Peptidase M7.
InterPro; IPR000605; Peptidase M27; I.
PRINTS; PR00740; BontoxiLysin.
PROSITE; PS00142; ZINC PROFFASE; I.
3D-structure; Direct protein sequencing; Hydrolase; Metalloprotease; Neurocoxin; Pharmaceutical; Transmembrane; Zinc.
CHAIN MET 0 0 Botulinum neurotoxin A light-chain.
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MEDLINE-22617869;
MEDLINE-22617869;
Dinean S.S., Bradshaw M., Johnson E.A.;
Neurotcoxin Gene Clusters in Clostridium botulinum Type A Strains:
Sequence Comparison and Evolutionary Implications.";
Curr. Microbiol. 46:345-352(2003).
EMBL; AF461540; AAM75961.1;
SEQUENCE 1296 AA; 149425 MW; DEABCF2754AE41E6 CRC64;
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Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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Botulinum neurotoxin A heavy-chain.
Zinc (catalytic).
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Pred. No. 1.5;
; Mismatches 2; Indels
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02-WAR-2004 (TrEMBLrel. 27, Last sequence update)
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Zinc (catalytic).
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or send an email to license@isb-sib.ch)
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                              EMBL; X52066; CAA36289.1; -.
EMBL; M30196; AAA23262.1; -.
EMBL; X92973; CAA63551.1; -.
EMBL; D67030; BAA11051.1; -.
EMBL; M27892; AAA23269.1; -.
PIR, A35294; BTCLAB.
PDB; 3BTA; X-ray; A=1-1295.
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57.1%;
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937 YENFSTSFWIRIPK 950
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les 8; Conservative
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"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
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MEDLINE=99343691; PubMed=10413679;
ALAIL G., Herreros J., Osborne S.L., Montecucco C., Rossetto O., Schiavo G.,
Schiavo G., "Functional characterisation of tetanus and botulinum neurotoxins binding domains.";
J. Cell Sci. 112:2715-2724 (1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=BoNT/B;
Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium.
Clostridium.
WCBI_TaxID=1491;
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               Length 361;
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64.3%; Pred. No. 0.58;
tive 4; Mismatches 1; Indels
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Campbell K.D.;
Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; X70819; CAR50150.1;
GO; 60009465; P:pathogenesis; IEA.
InterPro; IPR008985; ConA_like_lec_gl.
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361 361
361 AA; 42131 MW; A2EOFFFC81F9533D CRC64;
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         Score 58; DB 2;
Pred. No. 0.58;
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01-NOV-1999 (TrEMBLrel. 12, Last sequenc
01-OCT-2003 (TrEMBLrel. 25, Last annotat
Botuliuum neurotoxin type B (Fragment).
Name=boNT/B;
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MEDLINE=94013372; PubMed=8408542;
         51.8%;
64.3%;
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290 FLDFSVSFWIRIPK 303
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290 FLDFSVSFWIRIPK 303
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Best Local Similarity 64.3
Matches 9, Conservative
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NCBI_TaxID=1491;
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STRAIN=TYPE B / NCT 7273;
MEDLINE=94013372; PubMed8408542;
Campbell K., East A.K., Collins M.D.;
"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
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STARIN="Type B / Okra;
MEDLINE-85197963; PubMed=3888113;
Schmidt J.J., Sathyamoorthy V., Dasgupta B.R.;
"Partial amino acid sequences of botulinum neurotoxins types B and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Whelan S.M., Elmore M.J., Bodsworth N.J., Brehm J.K., Atkinson T., Minton N.P.; Molecular cloning of the Clostridium botulinum structural gene encoding the type B neurotoxin and determination of its entire nucleotide sequence."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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"Botulinum neurotoxin type B (strain 657): partial sequence and similarity with tetanus toxin.";
Biochimie 70:811-817(1988).
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P10844; P10843;
01-JUL-1999 (Rel. 11, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
01-OCT-2004 (Rel. 45, Last annotation update)
Botulinum neurotoxin type B precursor (EC 3.4.24.69) (BONT/B)
                                                                                                                                                                                                                                                      Score 58; DB 2; Length 441;
Pred. No. 0.72;
4; Mismatches 1; Indels
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                                                                                                                                                                                                  721D0B468E8C95A4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Appl. Environ. Microbiol. 58:2345-2354(1992).
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EMBL; AJ242628; CAB43706.1; -. GO; GO:0009405; P:pathogenesis; IEA. InterPro; IPR008985; ConA like lec_gl. InterPro; IPR011065; Kunifz_like.
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MEDLINE-92384550; PubMed=1514783;
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STRAIN-TYPE B / B-657;
MEDLINE-89000987; PubMed=3139097;
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IDENTIFICATION AS ZINC-PROTEASE.
MEDLINE=93054694; PubMed=1429690;
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441 AA; 52772 MW;
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Local Similarity 64.3%;
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81 FLDFSVSFWIRIPK 94
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Name=botB;
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Baquora B.R., Montecucco C.;

Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteolytic cleavage of synaptobrevin.";

In Tetanus Base of synaptobrevin.";

In Tetanus Base of synaptobrevin.";

In Tetanus Base of synaptobrevin.";

In Tetanus Base of synaptobrevin.";

In Telease. It binds to peripheral neuronal synapses, is internalized and moves by retrograde transport up the axon into the spinal cord where it can move between postsynaptic and presynaptic neurons. It inhibits neurotransmitter release by acting as a zinc endopeptidase that cleaves the 76-Gln-|-Phe-77 bond of synaptobrevin.

CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

CORACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and a heavy chain (H). The light chain has the pharmacological activity, while the N. and C-terminal of the heavy chain (H). The light chain mediate channel formation and toxin binding, respectively.

SUBCELLANBOUS: There are seven antigenically distinct forms of botulinum neurotoxin: Types A, B, Cl, D, E, F, and G.

SIMILARITY: Belongs to peptidase family M27.
                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its moch mon-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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R InterPro; IPR011065; Kunitz like.

R InterPro; IPR0100395; Peptidase_M27.

R InterPro; IPR000395; Peptidase_M27.

R InterPro; IPR0010963; Peptidase_M37; I.

R PRINTS; PR00760; BONTOXILYSIN; I.

R PROSTITE; PR001963; BONTOXILYSIN; I.

R PCSTITE; PR001963; BONTOXILYSIN; I.

R PCSTITE; PR001963; BONTOXILYSIN; I.

R PCSTITE; PR001963; BONTOXILYSIN; I.

R PCSTITE; PR001963; BONTOXILYSIN; I.

R PCSTITE; PR001963; BONTOXILYSIN; I.

R PCSTITE; PR001963; BONTOXILYSIN; I.

R PCSTITE; PR001963; BONTOXILYSIN; I.

T CHAIN 441 1290 BOULHINUM neurotoxin B heavy-chain.

T METAL 229 Zinc (catalytic) (By similarity).
Schiavo G., Rossetto O., Santucci A., Dasgupta B.R., Montecucco C.; "Botulinum neurotoxins are zinc proteins."; J. Biol. Chem. 267:23479-23483(1992).
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Botulinum neurotoxin B heavy-chain.
Zinc (catalytic) (By similarity).
By similarity.
Zinc (catalytic) (By similarity).
Interchain (Probable).
T -> M (in Ref. 4).
R -> G (in Ref. 2).
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                                                IDENTIFICATION OF SUBSTRATE.
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MEDLINE=98440323; PubMed=9767710; Santos-Buelga J., Collins M.D., East A.K.; Characterization of the genes encoding the Botulinum neurotoxin complex in a strain of clostridium botulinum producing type B & F
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                              Ihara H., Kohda T., Morimoto F., Tsukamoto K., Karasawa T., Nakamura S., Mukamoto M., Kozaki S.; Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases. EMBL; AB084155; BAC22064.1; -. HSSP; P10844; 1EPW.
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Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; Y13630; CAA73968.1; -.
EMBL; Y13630; CAA73968.1; -.
EMBL; Y13630; CAA73968.1; -.
EMBL; Y13630; CAAA73968.1; -.
GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0006508; P:perteolysis and peptidolysis; IEA.
EMBLEPPO; IPR001591; Botulinum.
EMBLEPPO; IPR001591; Botulinum.
EMBLEPPO; IPR0010965; COAA_IIKe_lec_gl.
EMBLEPPO; IPR001055; Peptidase_M27.
InterPro; IPR001055; Peptidase_M27.
InterPro; IPR0010955; Peptidase_M27.
EMBLEPPO; IPR001055; Peptidase_M27.
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GO: GO:0008405; P:pathogenesis; IEA.
GO: GO:000508; P:pathogenesis; IEA.
GO: GO:000508; P:pathogenesis; IEA.
InterPro; IPR011591; Botulium.
InterPro; IPR018985; ConA like lec_gl.
InterPro; IPR008985; ConA like.
InterPro; IPR008035; Peptidase M27.
InterPro; IPR006035; Peptidase M27.
InterPro; IPR006035; Peptidase M27.
PRINTS; PR001742; Peptidase M27; I.
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01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
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PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
Neurotoxin.
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923 FLDFSVSFWIRIPK 936
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SEQUENCE FROM N.A.
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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Clostridium botulinum.
Bacteriais Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
NCBI_TaxID=1491;
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STRAIN=EKlund 17B ATCC25765;
MEDLINE=9412559; PubMed=7764370;
MEDLINE=9412659; PubMed=7764370;
MULSON R.A., Collins M.D., East A.K., Thompson D.E.;
"Nucleotide sequence of the gene coding for non-proteolytic clostridium botulinum type B neurotoxin: comparison with other clostridial neurotoxins.";
Curr. Microbiol. 28:101-110(1994).
EMBL; X71343; CAA6482.1; -
PIR; 140631; 140631.
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GO; GO:0009405; P:pathogenesis; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
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InterPro; IPR018985; ConA like_lec_gl.
InterPro; IPR011665; Kunitz like.
InterPro; IPR001095; Peptidase_M27.
InterPro; IPR006025; Peptidase_M27.
InterPro; IPR006025; Peptidase_M27.
InterPro; IPR006025; Peptidase_M27.
INTERPRO; PR00760; BONTOXITYSIN.
ProDom; PR01963; Botulinum; 1.
PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN SEQUENCE 1291 AA; 150513 MW; 71BCAFE
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FLDFSVSFWIRIPK 935
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P:proteolysis and peptidolysis; IEA.
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF300466; AAL11499.1; -.
EMBL; AF300465; AAL11498.1; -.
HSSP; P10844; 1F31.
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Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF295926; AAK97132.1; -.
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GO, GO: 0008405; F: peptidase activity, IEA.
GO, GO: 0005508; P: proteclysis and peptidolysis; IEA.
InterPro; IPR011591; Botulinum.
InterPro; IPR01891; ConA like lec_gl.
InterPro; IPR01065; Kunitz like.
InterPro; IPR000395; Peptidase_M27.
InterPro; IPR000395; Peptidase_M27.
InterPro; IPR00142; Peptidase_M27; Pefm.; Pefm.; Peptidase_M27; I.
PRINTS; PR00740; BONTOXILYSIN.
                                                                                                                                                                                                                                                                                    01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
05-UUL-2004 (TrEMBLrel. 27, Last annotation update)
Type B cryptic neurotoxin.
Clostridium botulinum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51.8%; Score 58; DB 2; 64.3%; Pred. No. 2.2;
                     Score 58; DB 2
Pred. No. 2.2;
4; Mismatches
                                                                                                                                                                                                                                                 PRT; 1291 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               robom; PD001963; Botulinum; 1.
ROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO:0008233; F:peptidase activity; IEA GO:0009405; P:pathogenesis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4;
                   51.8%;
ilarity 64.3%;
Conservative
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923 FLDFSVSFWIRIPK 936
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                                                                                                     1 FNNFTVSFWLRVPK 14
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Best Local Similarity 64.37
9; Conservative
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Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
Kirma N., Ferreira
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Neurotoxin type B
                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=1491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=1491;
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                                                                                                                                                                                                        RESULT 19
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to licensee@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE-98278311; FubMed-9617769;
Milliams C.F., Inoue T., Lucus A.-M., Zanotto P., Roy P.;
Williams C.F., Inoue T., Lucus A.-M., Zanotto P., Roy P.;
"The complete sequence of four major structural proteins of African horse sickness virus serotype 6: evolutionary relationships within and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      between the orbiviruses.";
Virus Res. 53:53-73(1998).
-!- FUNCTION: The VP2 protein is one of the two proteins (with VP5)
which constitute the virus particle outer capsid. It is the major
target of the host immunogenic response.
-!- SIMILARITY: Belongs to the recoviruses VP2 protein family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=S2; Synonyms=L2;
African horse sickness virus 6 (AHSV-6) (African horse sickness virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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Pred. No. 2.6;
4; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                Score 58; DB 2; Length 1291;
Pred. No. 2.2;
4; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1051 AA; 122326 MW; 2B04DB9E389F4B5F CRC64;
                                                                                                                                                                                                                                                                                                                        1291 AA; 150824 MW; D7CA07BAE2EB8CD2 CRC64;
InterPro; IPR011591; Botulium.
InterPro; IPR008985; ConA like lec_gl.
InterPro; IPR001065; Kunitz_like.
InterPro; IPR000395; Peptidase M2.
InterPro; IPR006025; Pept M Zn_BS.
Pfam; PR01742; Peptidase M2.
PR01715; PR00760; BONTOXILYSIN.
ProDom; PD001963; Botulinum; 1.
PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (serotype 6)).
Viruses; dsRNA viruses; Reoviridae; Orbivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
0-UUL-2004 (Rel. 44, Last annotation update)
Outer capsid protein VP2.
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636 FSKRFVSYWYRVEKITTKHLE 656
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InterPro; IPR001742; Orbi VP2.
Pfam; PF000898; Orbi VP2; Ī.
Coat protein.
SEQUENCE 1051 AA; 122326 MW
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Best Local Similarity 47.6%;
Matches 10; Conservative 4
                                                                                                                                                                                                                                                                                                                                                                                      51.8%;
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923 FLDFSVSFWIRIPK 936
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Best Local Similarity 64.3.
Best Local 9; Conservative
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Gaps

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SEQUENCE OF 419-426.
MEDLINE=90344918; PubMed=2116911;
Gimenaz J.A., Dasgupta B.R.;
"Botulinum neurotoxin type E fragmented with endoproteinase Lys-C reveals the site trypsin nicks and homology with tetanus neurotoxin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINES-92174922; PubMed=1541280;
MEDLINES-92174922; PubMed=1541280;
Whelan S.M., Elmore M.J., Bodsworth N.J., Atkinson T., Minton N.P.;
"The complete amino acid sequence of the Clostridium botulinum type-E neurotoxin, derived by nucleotide-sequence analysis of the encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [1] —
SEQUENCE FROM N.A.
STRAIN=Type E / Beluga;
STRAIN=Type E / Beluga;
STRAININE=92181428; PubMed=1543481;
Poulet S., Hauser D., Quanz M., Niemann H., Popoff M.R.;
Sequences of the botulinal neurotoxin E derived from Clostridium botulinum type E (strain Beluga) and Clostridium butyricum (strains ATCC 43181 and ATCC 4375).";
Biochem. Biophys. Res. Commun. 183:107-113(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Binz T., Kurazono H., Wille M., Frevert J., Wernars K., Niemann H., "The complete sequence of botulinum neurotoxin type A and comparison with other clostridial neurotoxins."; "J. Biol. Chem. 265:9153-9158 (1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=94063091; PubMed=8243676; Schlavo G., Santtuci A., Dasgupta B.R., Mehta P.P., Jontes J., Schlavo G., Santtuci A., Dasgupta B.R., Mehta P.P., Jontes J., Benfenati F., Wilson M.C., Montecucco C.; cleave SNAP-25 at distinct COOH-terminal neurotoxins serotypes A and E cleave SNAP-25 at distinct COOH-terminal peptide bonds."; FEBS Lett. 335:99-103(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schmidt J.J., Sathyamoorthy V., Dasgupta B.R.; Interial amino acid sequences of botulinum neurotoxins types B and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria, Firmicutes, Clostridia, Clostridiales, Clostridiaceae,
                                                                                                                                                                                                                                                                                                                                                                  01-JUL-1993 (Rel. 26, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Botulinum neurotoxin type E precursor (EC 3.4.24.69) (BONI/E)
                                                                                     Length 367;
                                                                                                                              1; Indels
                    367 AA; 42854 MW; 0810595B3A865570 CRC64;
                                                                                  Score 56; DB 2;
Pred. No. 1.3;
                                                                                                                                                                                                                                                                                                          PRT; 1250 AA
                                                                                                                            5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arch. Biochem. Biophys. 238:544-548(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eur. J. Biochem. 204:657-667(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 1-251 FROM N.A. MEDLINE=90264400; Pubmed=2160960;
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                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                     53.8%;
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297 YKNFSISFWVRIP 309
                                                                                                                                                                 1 FNNFTVSFWLRVP 13
                                                                                                     Local Similarity 53.8
les 7; Conservative
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367
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01-JUL-1993 (Rel. 26,
05-JUL-2004 (Rel. 44,
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Q00496;
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SEQUENCE
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        NON TER
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Matches
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BXE CLOBO
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MEDLINE=94013372; PubMed=8408542;
Campbell K., East A.K., Collins M.D.;
"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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MEDLINE=94013372; PubMed=8408542;
Campbell K.K., Collins M.D.;
Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                      Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN=type E;
Campbell K.D.;
Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; X70818; CAA50149.1;
PIR; S48106; S48106.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42902 MW; 346A610C2FF70262 CRC64;
                                                            01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-OCT-2003 (TrEMBLrel. 25, Last annotation update) Botulinum neurotoxin type B (Fragment).
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Last annotation update)
    367 AA
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01-NOV-1996 (TrEMBLrel. 01, Last seque:
01-OCT-2003 (TrEMBLrel. 25, Last annot.
Botulinum neurotoxin type E (Fragment)
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InterPro; IPR008985; Cona_like_lec_gl.
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InterPro; IPR008985; ConA_like_lec_gl
Neurotoxin,
                                   01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last seq
01-OCT-2003 (TrEMBLrel. 25, Last ann
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Best Local Similarity 53.8%;
Matches 7; Conservative
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297 YKNFSISFWVRIP 309
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PIR; S21178; S21178.
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PRELIMINARY;
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Campbell K.D.;
                                                                                                                      Name=BoNT/E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neurotoxin.
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SEQUENCE
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                                                                                The record of SNAP-25 by types E and A botulinal neurotoxins.";

AL Biol Chem. 269:1617-1620(1994).

L. Biol Chem. 269:1617-1620(1994).

C. Lelease. It binds to peripheral neuronal synapses, is internalized and moves by retrograde transport up the axon into the spinal cord where it can move between postsynaptic and presynaptic neurons. It inhibits neurotransmitter release by acting as a zinc endopeptidase that catalyzes the hydrolysis of the 180-Arg-|-11e-catalyzes the hydrolysis of the 180-Arg-|-11e-catalyzes the hydrolysis of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

C. -- CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

C. -- CATALYTIC Disulfide-linked hererodimer of a light chain (l) and a heavy chain (H). The light chain has the pharmacological activity, while the N- and C-terminal of the heavy chain mediate channel commation and toxin binding, respectively.

C. -- SUBCELLANEOUS: There are seven antigenically distinct forms of command toxin binding, respectively.

C. -- SUBLILANEOUS: There are seven antigenically distinct forms of command toxin and the command
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                      MEDLINE=94124495; PubMed=8294407;
Binz T., Blasi J., Yamasaki S., Baumeister A., Link E., Suedhof T.C.,
Jahn R., Niemann H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProDom; PD001963; Bontoxilysin; 1.
NSOSITE; PS00142; ZINC PROTEASE; 1.
Direct protein sequencing; Hydrolase; Metalloprotease; Neurotoxin;
Transmembrane; Zinc.
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Botulinum neurotoxin E heavy-chain.
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Inc (catalytic) (By similarity).
Interchain (Probable).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             partial sequence and comparison.";

FASEB J. 2.1A175-A1750(1988).

-!- FUNCTION: Botulinum toxin acts by inhibiting neurotransmitter
release. It binds to peripheral neuronal synapses, is internalized
and moves by retrograde transport up the axon into the spinal cord
where it can move between postsynaptic and presynaptic neurons. It
inhibits neurotransmitter release by acting as a zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

COPACTOR: Binds I zinc ion per subunit (By similarity).

SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and a heavy chain (H). The light chain has the pharmacological activity, while the N- and C-terminal of the heavy chain mediate channel formation and toxin binding, respectively.

SUBCELULIAR LOCATION: Secreted.

MISCELLANEOUS: There are seven antigenically distinct forms of botulinum neurocoxin: Types A, B, Cl, D, B, F, and G.

SIMILARITY: Belongs to peptidase family M27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Cloning of a DNA fragment encoding the 5'-terminus of the botulinum type E toxin gene from Clostridium butyricum strain BL6340."; J. Gen. Microbiol. 137:519-525(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=91237316; PubMed=2033376; Füjil N., Tauzuki K., Yokosawa N., Fujil N., Kimura K., Murakami T., Indoh T., Tauzuki K., Yokosawa N., Yashiki T., Oguma K.; "Cloning of a DNA fragment encoding the 5'-terminus of the botulinum
                                                                                                                                                                                                                                                                                                               Poulet S., Hauser D., Quanz M., Niemann H., Popoff M.R.; "Sequences of the botulinal neurotoxin E derived from Clostridium botulinum type E (strain Beluga) and Clostridium butyricum (strains ATCC 43181 and ATCC 43755).";
                                                                                                                                                Clostridium butyricum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gimenez J., Foley J., Dasgupta B.R.; "Neurotoxin type E from Clostridium botulinum and C. butyricum;
                                       01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Botulinum neurotoxin type E precursor (EC 3.4.24.69) (BONT/E)
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  1250 AA.
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MEROPS; M27.002; -.
InterPro; IPR008985; ConA_like_lec_gl.
PRT;
                                                                                                                                                                                                                                                                              and ATCC 43755;
                                                                                                                                                                                                                                                                                                MEDLINE=92181428; PubMed=1543481;
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Search completed: January 25, 2005, 06:06:23 Job time : 71.4167 secs

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                                                                                                                                                                                              This peptide corresps. to residues 947-967 of Tetanus toxin. It can be used as a universal carrier for the prepn. of an immunogenic conjugate. It is covalently bound to a peptide or polysaccharide hapten derived from a pathogen. This conjugate can be used as a vaccine for malaria. This peptide is recognised by different T- helper cell clones in association with alleles of the human MHC. It contains 2 epitopes: (a) 953-967, recognised by DR-restricted clones; and (b) 947-960, recognised by all other DR and DP- restricted clones. (Updated on 25-MAR-2003 to correct PI field.) (Updated on 27-MUG-2003 to correct PI field.) (Updated on 24-0CF-2003 to standardise OS field)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A helper T-cell epitope (AAW06130) comprises amino acids 947-967 of tetanus toxoid protein. It can be utilised in novel peptide vaccines (sealso AAW06129, AAW06132) also including B-cell epitope(s) from human or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cholesteryl ester transfer protein; CETP; antigen; vaccine; cardiovascular disease; atherosclerosis; tetanus toxoid; T-cell epitope.
                                                                                                                 Synthetic peptide(s) used as universal carriers - for preparing immunogenic conjugates used as vaccines against plasmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cholesteryl ester transfer protein B cell epitope linked to T cel
epitope - used to generate vaccine to regulate CETP activity for
decreasing the risk of developing a cardiovascular disease e.g.
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                                                                                                                                                                                                                                                                                                                                                                                                                       Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 112; DB 2; 100.0%; Pred. No. 7.8e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tetanus toxoid protein T-cell epitope.
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                                                Corradin G;
                                                                                                                                                                  Claim 1; Page 13; 16pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FINFTVSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96WO-US006147.
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               (ENIE ) ENIRICERCHE SPA.
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                                                Ревві А,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1996-506103/50.
                                                                                  WPI; 1991-141874/20.
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                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                      Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                Blanchi
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response against endogenous CETP activity, thereby treating or preventing a cardiovascular disease, such as atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hetero:dimeric polypeptide immunogen in coiled-coil configuration with different antigens on each sub:unit - useful in vaccines and for antibody
                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Irvin RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       T-antigen, vaccine, antibody, T-cell, T-lymphocyte, alpha-helix, coiled-coil heterodimer, core peptide, subunit.
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                                                                                                                                               Score 112; DB 2;
Pred. No. 7.8e-12;
0; Mismatches 0;
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100.0%; Pred. No. 7.8e-12;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kay CM, Hodges RS,
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                                                                                                                                                                                                                                                                                                                                                                                                       AAR88397 standard; peptide; 21 AA
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                                                                                                                                                 100.0%;
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                                                                                                                    Query Match
Best Local Similarity 100.
Best Local Similarity
Annual 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T-cell antigen TT3 peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1996-010880/01.
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                                                                                                      Sequence 21 AA;
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Best Local S
Matches 21
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Clostridium tetani
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                                                                                         08-OCT-1998.
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                                                                                                                                                                                                                                               attached
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                                                                                                                                                                              Bay S,
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AAW67579
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                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence represents a broad range helper T cell epitope of the tetanus protein. It can be used in DNA plasmid-based vaccines against cholestery! ester transfer proteins (CETPS). CETPS mediate the transfer of cholestery! ester from high density lipoprotein (HDL) to very low versa. An increased CETP activity produces an atherogenic lipoprotein profile and induces atherosclerosis. A DNA plasmid-based vaccine comprises sequences encoding at least one B cell epitope of CETP linked in frame with at least one segment encoding a broad range helper T cell epitope. The vaccines can be used to elevate the ratio of circulating HDL to circulating LDL, VLDL or tocal cholesteric in a human. It can also be used for decreasing the level of endogenous CETP activity in a human. The brashing can be used to produce anti-CETP antibodies in vivo and for
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                                                                                                                                                                                                                                                                                                                                                  DNA plasmid-based vaccine encodes CETP B cell and helper \tau cell epitope(s) - used for elevating high density lipoprotein levels, and for
                                                                                              Cholesteryl ester transfer protein; CETP; cholesteryl ester; high density lipoprotein; HDL; very low density lipoprotein; LDL; T cell epitope; antibody; DNA plasmid-based vaccine; broad range helper T cell epitope; treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                        Broad range helper T cell epitope from the tetanus toxoid protein.
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100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tetanus toxin fragment (residues 947-967)
                                                                                                                                                                                                                                                                                                                                                                                               Disclosure, Page 44; 67pp; English
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                                                                                                                                                                                                                                                                                                                                                                         treating cardiovascular disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                treating cardiovascular disease
         AAW46449 standard; peptide; 21
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                                                   (first entry)
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Best Local Similarity 100.0
Matches 21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                           cardiovascular disease.
                                                                                                                                                                                                                                                                                    (TCEL-) T CELL SCI INC.
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                                                                                                                                                              Clostridium tetani
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                                                    18-MAY-1998
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                                                                                                                                                                                    WO9741227-A1
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                                                                                                                                                                                                                                                                                                          Thomas LJ;
                               AAW46449;
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AAW46449
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The invention relates to a new carbohydrate peptide conjugate, which comprises a carrier with a dendrimeric poly-lysine enabling multiple comprises to be covalently attached to it. Also claimed are: (1) an antibody purified from biological fluid or cells of organisms cambody purified from biological fluid or cells of organisms of administered with the carbohydrate peptide conjugate, and (2) a diagnosis of the carbohydrate peptide conjugate. The peptide conjugate, antibody and carbohydrate peptide conjugate. The peptide conjugate antibody and conjugate is against thunurs. These can be used to support an immune response of vaccines against the same and the peptide conjugate in manner response capinst viral infections caused by hepatitis virus, HIV or cytomegalo virus. They can be used to enhance immune responses, especially B- and T-CC carbohydrate peptide conjugate stimulates the antibody and T-cell carbohydrate peptide conjugate stimulates the antibody and T-cell casponse without stimulating undesired immune responses. The composition conspiculating to this sequence may be used to animals. The present sequence corresponds to residues 947-967 of tetanus conting the survival of tumour bearing humans and conjugate corresponding to this sequence may be used to an epitope in a carbohydrate peptide conjugate conjugate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carbohydrate peptide conjugate used as vaccine - comprises carrier with dendrimeric poly-lysine enabling multiple epitopes to be covalently
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Tetanus toxin; vaccine; antibody; carbohydrate peptide conjugate; dendrimeric poly-lysine; epitope; tumour.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
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Pred. No. 7.8e-12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure, Page 13; 55pp, English.
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be used in the method of the invention for inducing antibody-dependent cellular cytotoxicity (ADCC) against a tumour cell which is characterised by overexpression of HER 2/neu or epidermal growth factor receptor (BGFR), comprises contacting the tumour cell with a multispecific protein molecule (preferably a single chain antibody comprising; (a) an anti-FC receptor antibody or an antigen binding fragment; (b) a portion which binds to HER 2/neu; and (c) a portion which binds to HER 2/neu; and (c) a portion which binds to EGFR. The method can be used for treating cancers especially breast cancer or ovarian cancer. The multispecific antibody can also be administered prophylactically to vaccinate a subject against infection by a target cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The claims detail a method for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (i.e. self-proteins), for example, human prostate specific membrane antigen (PSW), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSW, human Her2 and human/murine FGP8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     associated peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Foreign epitope, P2; prostate specific membrane antigen, PSM, Her2; Heregulin 2; Fibroblast growth factor 8b; FGF8b; vaccination; eytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Haaning J, Leach D,
                                                                                                                                                                                                                                                                                 Length 21;
                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 2; Length 2
100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inducing immune responses to weakly immunogenic, tumor as antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 214; 220pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92626 standard; protein; 21 AA
                                                                                                                                                                                                                                                                                                                                                                                              1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                      1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98DK-00001261.
98US-0105011P.
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                                                                                                                                                                                                                                                                                                                              21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Foreign epitope P30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clostridium tetani.
                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 21; Conserv
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                                                                                                                                                                                                                                         Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY92626;
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                                                                                                                                                                                                                                                                                                                                                                 The invention relates to the manufacture of a synthetic chimeric peptide comprising a non-typable Haemophilus influenzae fimbrin peptide fused via
                                                                                                                                                                                                                                                                                                                                                                                                       a linker peptide to a T-cell epicope peptide. The chimeric peptide is used in immunogenic compositions which induce an immune response against non-typable Haemophilus influenzae. This sequence represents an example of a T-cell epitope peptide used to generate the chimeric peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Multispecific single chain antibody; antibody H22; tumour cell; therapy; antibody-dependent cellular cytotoxicity; ADCC; HER 2/neu; infection; epidermal growth factor receptor; breast cancer; ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence represents a tetanus toxoid epitope and is recognised by the multispecific single chain antibody designated H22. The antibody can
                                                                                                                                                                                                                                                         Synthetic chimeric fimbrin peptide - useful for vaccination against non-
typable Haemophilus influenzae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 112; DB 2;
Pred. No. 7.8e-12;
Mismatches 0;
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                                            95US-00460502.
                                                                                      95US-00460502.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95US-00484172
                                                                                                                                                                         Bakaletz LO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-JAN-1999 (first entry)
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nes 21; Conservative
                                                                                                                              (OHIS ) UNIV OHIO STATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tetanus toxoid epitope.
                                                                                                                                                                                                                   WPI; 1999-044514/04.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 21 AA;
                                                                                                                                                                         Kaumaya PTP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-JUN-1996;
                                          02-JUN-1995;
                                                                                    02-JUN-1995;
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    01-DEC-1998
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Matches
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In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.
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                                                                                                                                                                                                                        Amino acid sequence of the tetanus toxoid P30 epitope.
                                                                                                       AAY84428 standard; peptide; 21 AA
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            1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Halkier T, Haaning J;
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                                                                                                                                                                                                                                                                                                                                                            Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-SEP-1998;
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                                                                                                                                                                                    25-JUL-2000
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                                                                                                                                               AAY84428;
                                                                    RESULT 10
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                                                                                       AAY84428
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Determining presence of cancer in samples, especially useful for detecting bladder, prostate and lung cancer comprises assaying sample for expression of tumor rejection antigen precursor MAGE-10.
epitope (e.g. P2 and/or P30) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively
                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; MAGE-10; tumour rejection antigen precursor; bladder cancer; prostate cancer; lung cancer; cancer detection; oesophageal cancer; head and neck cancer; melanoma; myeloma; sarcoma; immunogen; tetanus toxin.
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                                                                                                                       Length 21;
                                                                                                                                                             Indels
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                                                                                                                   100.0%; Score 112; DB 3;
100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tetanus toxin T cell epitope helper peptide P30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 12; Page 14; 26pp; English.
                                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                                                                                 AAY99876 standard; protein; 21 AA
                                                                                                                                                                                                                                  FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                1 FNNFTVSFWLRVPKVSASHLE
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                                                                                                                                                         21; Conservative
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                                                                                                                                       Similarity
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                                                                            Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
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                                                                                                                   Query Match
Best Local S:
Matches 21,
                                                                                                                                                                                                                                                                                                                                                                        AAY99876;
                                                                                                                                                                                                                                                                                               RESULT 9
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99WO-DK000481. 98DK-00001164 98US-0102896P

(first entry)

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The present sequence represents the tetanus toxoid P30 epitope. It is used to create a fusion protein with murine osteoprotegerin ligand (OPGL). Osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II transmembrane protein. The murine and human OPGL polypeptides are 87% nomologous. OPGL is a potent osteoclast differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also an activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL activity in an animal. The method comprises using at least one OPGL polypeptide or subsequence, and/or at least one OPGL polypeptide are useful for treating, preventing and ameliorating content of optic polypeptide are useful for treating, preventing and ameliorating contents of the conditions characterised by excessive
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                       bone resorption
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 21 AA;
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AAY49260
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AC AAY49
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Gaps

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Indels

Length 21;

; Score 112; DB 3; ; Pred. No. 7.8e-12; 0; Mismatches 0;

100.0%; 100.0%;

Query Match
Best Local Similarity 100.0
Matches 21, Conservative

1 FUNFTVSFWLRVPKVSASHLE

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Synthetic.

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                        proteins and their coding sequences to down regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amyloid protein; neuroprotective; nootropic; immunostimulant; vaccine; Alzheimer's disease; anticonvulsant; gene therapy; Pick's disease; antidiabetic; systemic amyloidosis; maturity onset diabetes; ALS; amyctrophic lateral sclerosis; Parkinson's disease; encephalopathy; Huntington's disease; fronto-temporal dementia; P30 epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                          The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 ({\rm Lb}-5) analogues and modified {\rm Lb}-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 112; DB 3;
100.0%; Pred. No. 7.8e-12;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                        Example 6; Page 137; 172pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAE11764 standard; peptide; 21 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani P30 epitope.
19-APR-2000; 2000WO-DK000205.
                                        99DK-00000552
                                                           99US-0132811P
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01-MAR-2000; 2000US-0186295P.
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                                                                                                  (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           helminthic infections
                                                                                                                                                                                   WPI; 2000-672791/65.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-589796/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAD18756.
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                                        23-APR-1999;
06-MAY-1999;
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                                                                                                                                            Klysner S;
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Best Local Si
Matches 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention provides carrier proteins comprising at least 5 CD4+ T cell epitope. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) constructing oligonucleotide molecules that encode peptide epitopes; (b) annealing the oligonucleotide molecules that encode peptide epitopes; (b) duplexes into an expression vector; (d) introducing the expression vector into a host cell; and (e) isolating the fusion protein produced from a culture of the host cells. The carrier protein can be used as a protective immunogen in the control of diseases caused by encapsulated bacteria. Sequences AAY49256-266 represent CD4+ T cell epitopes inserted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Carrier proteins containing CD4+ epitopes useful for protecting against diseases caused by encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                           Carrier protein; CD4+; T cell epitope; N6; N10; N19; immunogen; encapsulated bacteria.
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100.0%; Pred. No. 7.8e-12;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in the recombinant polyepitope carrier proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Page 36; 76pp; English.
                                                       CD4+ T cell epitope P30TT fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tetanus P30 epitope SEQ ID NO: 24.
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                 (first entry)
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AAB45512;

AAB45512

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Query Match Matches

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The invention relates to a method for in vivo down-regulation of amyloid protein such as beta amyloid (Abeta) in an animal, including human. The method comprising presenting to the animal's immune system an immunogenically effective amount of at least one amyloidogenic protein or its subsequence and/or at least one analogue of the amyloidogenic protein or its subsequence, and its polypeptide. The amyloidogenic protein or its subsequence, and its analogue is useful for the preparation of an immunogenic composition comprising an adjuvant for down-regulating amyloid in an animal. They are also useful in the treatment, prophylaxis or amelioration of Alzheimer's disease or other diseases characterised by amyloid deposits. They are also useful in the treatment of systemic amyloidosis, maturity onset dementia, amytorophic lateral sclerosis (ALS), pick's disease and prionrelated transmissable spongiform encephalopathies. They are also useful for inducing production of antibodies against an amyloidogenic property.
subsequence and/or at least one analogue of the amyloidogenic polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amyloid disease, amyloid fibril deposition, amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiownypathy; transmissible spongiform encephalopathy; creuzzfeld-Jakob disease; Kuru; haemodialysis-asssociated beta-2-microglobulin deposition; carrier protein; universal T-cell epitope.
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                                                                               Example 3; Page 118; 120pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            related to the invention
                              to the immune system.
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Disclosure; Page 43; 140pp; English.

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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a component. The serum immunoreactivity control level indicates a control of component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The control compositions of the invention are useful for treating a wide variety of disorders characterised by amyloid fibril deposition in a patient. Such disorders include Alzheimer's disease characterised by cialet amyloid beta peptide fibril deposits; type 2 diabetes characterised by Cialet amyloid protein peptide (lAPP, amylin) fibrils; reactive systemic amyloidosis and familial amyloid A protein (ApoSSA)); systemic senile amyloidosis and familial amyloid A protein (ApoSSA)); systemic senile concephalopathies (e.g. Creutzfeld-Jakob disease, Kuru) characterised by conception protein deposits, and beta-2-microglobulin deposits which form as a create concephalopathies of long term haemodialay energement. The present sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                represents a universal T-cell epitope which may be used as a carrier for an epitope derived from an amyloid plaque component in a composition of
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Best Local Similarity

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disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to abeta, the antibody binds to an amyloid deposit and induces a clearing response (For receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention relates to compositions for stimulating the immune system and for treating malignancies associated with overexpression of the HBR-2 proteins. The compositions comprise immunogenic groups of the HBR-2 proteins. The present sequence is one such peptide used in the compositions of the present invention. The compositions can be used for treating cancer, e.g. breast, ovarian, lung, prostate and colon cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Compositions comprising polypeptides and polynucleotides for stimulating the immune system and for treating malignancies associated with overexpression of the HER-2 protein.
                                                This invention describes a novel method of preventing or treating a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cytostatic; immune response; HER-2; human; epitope; cancer; breast;
                                                                                                                                                                                                                                                                                                                Score 112; DB 4;
Pred. No. 7.8e-12;
                                                                                                                                                                                                                                                                                                                                                Mismatches
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               Disclosure; Page 28; 143pp; English
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                                                                                                                                                                                                                                                                                                              100.0%;
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                                                                                                                                                                                                                                                                                                                          Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HER-2 B cell peptide P30.
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                                                                                                                                                                                                                                                                                 Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB68637;
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                                                                                                                                                                                                                                                                                                                 Query Match
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Matches
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100.0%; Score 112; DB 4; Length 21;

Query Match

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Length 21;

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                                                                                                                                                                                                                                                                                                                      Fcalpha receptor; epidermal growth factor; EGF; HER2 receptor; tumour; immune thrombocytopenia purpura; systemic lupus erythematosus; vaccine; cytostatic; antiviral; protoxoacide; antifungal; immunosuppressive; antiniflammatory; dermatological; hemostatic; tetanus toxoid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bispecific molecule comprising specific binding sites for an Fc-alpha receptor and an epidermal growth factor, used to induce effector cell killing of tumor cells.
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                      Gaps
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                    Indels
100.0%; Pred. No. 7.8e-12; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Graziano R, Keler T;
                                                                                                                                                                                                                                                                                      Tetanus Toxoid universal Th epitope TT947.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 7; Fig 24; 183pp; English.
                                                                                                                                                                              AAB61958 standard; peptide; 21 AA.
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                                                                                   1 FNNFTVSFWLRVPKVSASHLE 21
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                                                    1 FNNFTVSFWLRVPKVSASHLE
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10-MAR-2000; 2000US-00523279.
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                                                                                                                                                                                                                                                     (first entry)
                21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                 Clostridium tetani.
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                                                                                                                                                                                                                   AAB61958;
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                    Matches
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                                                                                                                                             RESULT 17
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us-09-806-703a-14.rag

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HER 2/neu; epidermal growth factor receptor; EGFR; multispecific protein; Fc receptor; FCR; tumor cell; breast; cancer; sarcoma; carcinoma; HIV; pathogenic; Toxoplasma gondii, candidiasis; systemic lupus; cytostatic; immune thrombocytopenia purpura; immunosuppressive; antiviral; antifungal; antiprotozoal; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inducing killing of tumor cells which expresses HER 2/neu or epidermal growth factor receptor (BGFR) by contacting the cell with multispecific proteins comprising an anti-Fc receptor, -Her 2/neu or -EGFR antibody, useful for treating cancer.
                                                                  Universal tetanus toxin Th epitope TT947-967.
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96US-00661052.
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(first entry)
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                                                                                                                                                                                                                                                                                                                                                                         Clostridium tetani.
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25-SEP-2001
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NAME OF COLORS OF STREET O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence is that of the promiseuous tetanus toxic T-cell epitope P30. It is an object of the invention to produce a recombinant therapeutic vaccine capable of effecting down-regulation of growth differentiation factor 8 (GDF-8) in order to increase the muscle growth differentiation factor 8 (GDF-8) in order to increase the muscle growth cate of farm animals. Variants of GDF-8 (see AAB20145-53) are provided that are capable of breaking autotolerance against autologous GDF-8.

These comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as the comprise the C-terminal portion of the pitope such as the comprise the C-terminal region limits the possible sites in which the T-cell epitope can be positioned without major disturbance of the comprise of the animals bounced part of an order of the animals. Downer of GDF-8 variants can be used for genetic immunisation of the animals. Downer of the increase muscle mass by up to at least comparation of GDF-8 activity can increase muscle mass by up to at least comparation of GDF-9 activity can increase muscle mass by up to at least comparation of GDF-9 and diditives. Anti-GDF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                         Tetanus toxin, T-cell epitope, growth differentiation factor 8, GDP-8, myostatin; down-regulation; vaccine; muscle; meat; cachexia; cardiant.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mouritsen S, Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure, Page 95; 110pp; English.
                                                                     ¥.
                                                                                                                                                                                                                                                                               Tetanus toxin T-cell epitope P30.
                                                          AAB20144 standard; peptide; 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-JUL-2000; 2000WO-DK000413.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99DK-00001014.
99US-0145275P.
                                                                                                                                                                                                             (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200105820-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JUL-1999;
26-JUL-1999;
                                                                                                                                                                                                             30-APR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Halkier T,
                                                                                                                                    AAB20144;
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Best Local S:
Matches 21
                       AAB20144
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Graziano R, Somasundaram C;

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The invention relates to a new method for inducing killing of a tumor cell which expresses HER 2/neu or epidermal growth factor receptor (EEFR). The method comprises contacting the tumor cell with a multispecific protein comprising a component, preferably an antibody, which binds to an FC receptor (FCR), Her 2/neu or EGFR. The method is useful for inducing killing of a tumor cell from breast cancer, sarcoma, carcinoma, or ovarian cancer. Specific multispecific proteins can also be administered to a subject to treat or prevent other diseases or conditions, including pathogenic infections (e.g., viral (such as HIV)), protozoan infections (such as Toxoplasma gondii), fungal infections (such as acandidiasis), and an autoimmunity (e.g. immune thrombocytopenia purpura and systemic lupus). The present sequence represents an universal tetanus toxin Th epitope TT947-967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Multivalent protein; immune response; Plasmodium vivax; parasite; protozoacide; vaccine; malaria; recombinant; ViVac1; ViVac2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 4;
100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amino acid sequence of P30 epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
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AAB85453 standard; peptide; 21 AA.

RESULT 19

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AAB85453

AAB85453;

1 FNNFTVSFWLRVPKVSASHLE 21 FINITUSFWLRVPKVSASHLE 21

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The invention relates to an immunogen comprising at least one first antigenic determinant that includes at least one B-cell epitope and/or at least one eyetoxic Tlymphocyte (CTL) epitope, and at least one second antigenic determinant that includes a T helper cell epitope (TH epitope), where each of the first and second antigenic determinants are coupled to an activated polyhdroxypolymer carrier. The invention also relates to an immunogenic composition for raising an immunogen or immunogenic composition in a mammal, including a human. The immunogen or immunogenic composition contained in a virtual lymph node (VLN) device is useful for immunising an animal, including a human, againet an antigen of choice, where the antigen shares at least one first antigenic determinant with the immunogen. This sequence represents a T helper cell epitope used in synthesis of an immunogen of the invention
                                                                                                                                                                                                                                                        Novel immunogen useful for immunizing an animal, has an activated polyhydroxypolymer backbone to which is attached an antigenic determinant including a B cell epitope and another determinant including a T-helper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer;
Tetanus toxoid precursor peptide; tentoxylysin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tetanus toxoid precursor peptide, tentoxylysin, #2.
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Pred. No. 7.8e-12;
Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                         Example 1; Page 51; 52pp; English.
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19-FEB-2001; 2001WO-DK000113.
20-FEB-2001; 2001US-00785215.
20-AUG-2001; 2001DK-0001231.
22-OCT-2001; 2001US-0337543P.
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                                                                                                                                                               Koefoed P;
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                                                                                                                   (PHAR-) PHARMEXA AS
                                                                                                                                                                                                            WPI; 2002-706932/76.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
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                                                                                                                                                               Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-NOV-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                              epitope
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stimulate an immune response to Plasmodium vivax. (I) comprises antigenic

determinants, fragments or conservative substitutions, derived from more

than one stage in a life cycle of a Plasmodium vivax parasite. (I) is

useful as a vaccine for stimulating an immune response, specifically a

protective immune response that confers increased resistance to infection

by Plasmodium parasites, such as P. vivax. (I) is especially useful in

the treatment, prevention and reduction of malarial infection, as

c the treatment, prevention and reduction of Plasmodium species

in a biological sample, and for conferring immunity against multiple

stages of the malarial parasite. The antibodies produced are useful for

the detection or measurement of antigenic epitopes derived from one or

more stages in a life cycle of a parasite, particularly P. vivax. The

vaccine comprising the recombinant proteins, is cost-effective, health-

promoting intervention for controlling, preventing or treating the

content of a P30 epitope, a component of the multivalent and multistage

proteins vivacip and vivaczp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                            New recombinant multivalent protein comprising antigenic determinants derived from more than one stage in a life cycle of Plasmodium vivax, useful as a vaccine for treating, preventing and reducing malarial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lmmunogen, B-cell epitope, cytotoxic T lymphocyte, CTL; TH epitope,
l helper cell epitope, virtual lymph node device.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 112; DB 4; Length 21; 100.0%; Pred. No. 7.8e-12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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                                                                                                                                                                                                        (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 25; 59pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 FUNFTVSFWLRVPKVSASHLE 21
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                                                                                                                 29-JAN-2001; 2001WO-US002937
                                                                                                                                                          31-JAN-2000; 2000US-0179213P.
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                                                                                                                                                                                                                                                     Xiao L, Zhou Z;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        T helper cell epitope #2.
                                                                                                                                                                                                                                                                                                   WPI; 2001-514557/56.
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                        WO200155181-A2.
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                                                                   02-AUG-2001.
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Length 21; Indels

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Disclosure; Page 120; 122pp; English.
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Best Local Similarity 100.
Matches 21; Conservative
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                                                                                                                                                                                                                                                                                               Sequence 21 AA;
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Matches
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                                                                                                                                                                                            antibodies against one symmetric immunoseming specification supported antibodies against good or symmetric institution states of the states of
                                                                        gonadotropin releasing hormone, comprises fusion peptide having
promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel analog of amyloid precursor protein or beta amyloid for treating Alzheimer's disease, has amyloid precursor protein/beta amyloid incorporating B-cell epitope of amyloid protein and foreign T-helper epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tetanus toxoid; epitope; amyloid precursor protein; APP; beta amyloid; vaccine; genetic immunisation; nootropic; neuroprotective; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                               The invention relates to a synthetic immunogen for inducing specific
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                                                     synthetic immunogen for inducing immune response against
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 5; 100.0%; Pred. No. 7.8e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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                                                                                                                                              Disclosure; Page 29; 43pp; English.
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22-OCT-2001; 2001US-0337543P.
16-APR-2002; 2002DK-0000558
16-APR-2002; 2002US-0373027P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-AUG-2002; 2002WO-DK000547.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21; Conservative
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N-PSDB; ABZ81993.
                   WPI; 2002-049440/06.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 21 AA;
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                                                     Novel
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                          epitope P30. The invention provides methods for compositions for combatting diseases characterised by deposition of amyloid, such as Alzaeimer's disease. Immunisation is preferably effected by administration of analogues of autologous amyloid precursor protein (APPP) or beta amyloid (Abeta), the analogues being capable of inducing antibody production against the autologous amyloidogenic polypeptides. Especially preferred as an immunogen is autologous Abeta which has been medified by introduction of no or a few foreign, immunodominant and promiscuous Teell epitopes, such as tetanus toxoid P30 epitope. Genetic immunisation against APP or Abeta and vaccination using live vaccines are also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a synthetic chimeric fimbrin peptide. The peptide is useful for treating a non-typable Haemophilus influenzae (NTH1) infection and otitis media. The synthetic peptides do not require tedious purification techniques. The present sequence represents the amino acid sequence of a Clostridium tetani T-cell epitope #4.
toxoid T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fimbrin; non-typable Haemophilus influenzae; NTHi infection;
otitis media; epitope; immunogenic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 21;
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   The present sequence is the protein sequence of tetanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 6;
100.0%; Pred. No. 7.8e-12;
tive 0; Mismatches 0;
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100.0%; Pred. No. 7.8e-12;
tive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADA25170 standard; peptide; 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-00148711.
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1es 21; Conservative
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The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCS) in the animal of at least 1 modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a tetanus toxoid (TT) P30 epitope that can be introduced into a CEA polypeptide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                     Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                        presenting cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                  CEA, immune response; carcinoembryonic antigen; antigen pre
APC; cytostatic; vaccine; tetanus toxoid; p2; p30; antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   universal T-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BCG; T-cell; epitope; gastrointestinal; antiulcer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 140; 140pp; English.
                  Tetanus toxoid P30 epitope sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADC09977 standard; peptide; 21 AA
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                                                                                                                                                                                                                                                        2002DK-00000082.
2002US-0350047P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tetanus toxoid TT947-967,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21; Conservative
                                                                                                                                                                                                                                                                                                                                               Klysner S, Voldborg
                                                                                                                                                                                                                                                                                                             (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-587260/55.
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                                                                                                         Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003072040-A2.
                                                                                                                                             WO2003059379-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 21 AA;
                                                                                                                                                                                                                                                      17-JAN-2002;
17-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-DEC-2003
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TWF, TWFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a tetanus toxoid epitope peptide. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                     Multimeric protein; interleukin 5; IL5; TNPalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
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                                                                                                                                                                                                                                     Tetanus toxoid epitope (P30) peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 2; Page 107; 196pp; English
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FNNFTVSFWLRVPKVSASHLE 21
                    1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                        AAO30455 standard; peptide; 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABR82483 standard; peptide; 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-NOV-2001; 2001DK-00001702.
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                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BRATT T.
VOLDBORG B.
MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PHARMEXA AS.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                             tetanus toxoid.
                                                                                                                                                                                                  22-SEP-2003
                                                                                                                                                                                                                                                                                                                                             Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                     22-MAY-2003.
                                                                                                                                                              AAO30455;
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(KLYS/)
(NIEL/)
(BRAT/)
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(MOUR/)
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ABR82483
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Gaps

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Matches
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                                                                                                                                                              The present sequence is that of a universal T-cell epitope comprising amino acids 947-967 of tetanus toxoid. Universal T-cell epitopes such as this can be used as carriers of peptide agents of the invention that bind alpha-4 integrin or a dimer comprising an alpha-4 integrin subunit.

Linkage to a carrier will improve the immune response to a peptide that may be too small to be immunogenic on its own. A method of chronically reducing a patient's pathological inflammation involves administration of an agent that specifically binds to an alpha-4 integrin. The agent is administration of an agent of months, preferably at least 12 months. The administration maintains alpha-4 integrin receptor saturation to chronically suppress pathological inflammation in the patient. The pathological inflammation in the patient. The pathological inflammation is caused by inflammatory disease of the gastrointestinal tract, such as crohn's disease, ulcerative collisis or inflammatory bowel disease, or is
                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                     Preventing and/or reducing pathological inflammation by administration of an agent inhibiting alpha-4 integrin or its dimer, useful in treating multiple sclerosis, Crohn's disease, ulcerative colitis or inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel synthetic chimeric fimbrin peptide LB1 or LB2 comprising a first
                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                              Disclosure; Page 17; 89pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                      1 FNNFTVSFWLRVPKVSASHLE 21
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23-APR-2002; 2002US-0374501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-00148711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C. tetani T cell epitope #4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JAN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                               21; Conservative
                     (ELAN-) ELAN PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BAKA/) BAKALETZ L O.
(KAUM/) KAUMAYA P T P.
                                           Yednock TA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-810881/76.
                                                                 WPI; 2003-712654/67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                     Similarity
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                                                                                                                                                                                                                                                                                                                                                     Sequence 21 AA;
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                                           raylor J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADC89659;
                                                                                                                                                                                                                                                                                                                                                                          Query Match
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                                                                                                                                                       The invention relates to a synthetic chimaeric fimbrin peptide LB1 or LB2 comprises a first peptide unit derived from H. influenzae fimbrin, a second peptide unit containing a T cell epitope and a third linker peptide which connects the first peptide to the second. The chimaeric peptide is useful for inducing an immune response in animals against nontypable Haemophilus influenzae (NTHi) and for preventing or reducing adherence of NTHi to host cells thereby preventing or reducing the severity of otitis media. The present sequence is a clostridium tetani T cell epitope for use in the chimaeric peptides of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes a method for reducing pain or increasing the threshold for nociception in an individual comprising administering an agent capable of inducting an active immune response that trargets the individual's autologous tumour necrosis factor alpha (TNFalpha). The agent has analgesic activity, and can be used in a vaccine against autologous TNFalpha. The method is useful in reducing pain or increasing the threshold for nociception in individual. The method is especially intended for reducing neuropathic pain. The present sequence represents
peptide unit and third linker reducing severity of otitis media.
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         epitope as second for preventing or
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                                                                                                   Claim 10; SEQ ID NO 8; 15pp; English.
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2002US-0363128P
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      peptide unit, T cell
peptide unit, useful
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 21 AA;
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11-MAR-2002;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                factor alpha
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The invention relates to a process for selecting ligands (A) of HLA (human leukocyte antigen)-DP4 comprising: (a) incubating purified DP4 with a labelled peptide (I) in presence of different concentrations of test compounds; (b) separating complexes formed; (c) determining DP4-(I) complexes by measuring a signal from the label; and (d) selecting compounds having binding ICSO less than 1000 nM, corresponding to the concentration required to inhibit 50 % binding of (I). (I) has signal-to-noise ratio over 5, at 10 nM, in a direct binding test to DP4. (A) cause concentration over 5, at 10 nM, in a direct binding test to DP4. (A) cause them, are useful as immunomodulators, including uses in vaccines against pathogens and tumor cells, also for treating autoimmune diseases (multiple sclerosis and type I diabetes), allergy and graft rejection. (A) are useful as reagents for diagnosing the immune status of an individual, while labelled complexes of DP4 with (A) are used to select antigen-specific CD4+ T cells. The method identifies ligands specific for HLA-DP4 and allows exact definition of the binding motif shared by DP4 chinding ligands. This sequence represents an example of a peptide ligand of the invention. The peptides are labelled (biotinylated) at their N-
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tetanus toxoid P30 epitope, which is given in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Process for selecting ligands for human leukocyte antigen DP4, useful immunomodulators for treating e.g. tumors, based on inhibition of
                                                                                                                                                                                                                                                                                                                                                                                                                                        cytostatic; immunostimulant; immunosuppressive; neuroprotective; antidabetic; antiallergic; ligand; HLA-DP4; human leukocyte antigen; immunomodulator; vaccine; pathogen; tumor cell; multiple sclerosis; diabetes; allergy; graft rejection.
                                                                                                                            Gaps
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                                                                                        Length 21;
                                                                                                                           Indels
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(SEDA-) SEDAC THERAPEUTICS SOC ETUD DEV ANTIGENE.
                                                                                       Score 112; DB 7;
Pred. No. 7.8e-12;
Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Buhot C,
                                                                                                                                                                                                                                                                                                                                                                                                    HLA-DP4 binding peptide ligand #1.
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                                                                                                                                                           1 FNNFTVSFWLRVPKVSASHLE 21
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0
                                                                                       100.08;
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                                                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                                                                           21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-395920/38.
                                                                                       Query Match
Best Local Similarity
                  present invention.
                                                     Sequence 21 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                            ADD71439;
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                                                                                                                           Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to antigenic peptides derived from tumour suppressor protein WTI which induce HLA-A24 restricted cytotoxic T-lymbhocytes. The peptides can be used in the preparation of cancer vaccine for treatment and prevention of cancer, including leukaemia, multiple myeloma, lymphoma, and cancer of the stomach, colon, breast, liver, ovary, skin, pancreas, prostate and womb. The present sequence is a polypeptide used in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Antigenic peptides derived from WT1 which induce HLA-A24 restricted cytotoxic T-lymphocytes for production of cancer vaccine and treatment
                              Gaps
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                                                                                                                                                                                                                                                     Human; mouse; HLA-A24-restricted cancer antigen; antigen; cancer; tumour suppressor protein; cytostatic; WT1; vaccine.
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0
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    Length 21;
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Score 112; DB 7;
Pred. No. 7.8e-12;
; Mismatches 0;
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100.0%; Pred. No. 7.8e-12;
Mismatches 0;
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                                                     1 FNNFTVSFWLRVPKVSASHLE
                                                                      1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                              AAO24396 standard; peptide; 21
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  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                        (CHUS ) CHUGAI SEIYAKU KK.
(SUMU ) SUMITOMO PHARM CO LTD.
(SUGI/) SUGIYAMA H.
                                                                                                                                                                                                                                                                                                                                                                                                  12-JUN-2002; 2002JP-00171518.
20-SEP-2002; 2002JP-00275572.
                                                                                                                                                                                                                                                                                                                                                                          12-JUN-2003; 2003WO-JP007463.
                                                                                                                                                                                                 (first entry)
             Local Similarity 100.
ses 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and prevention of cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sugiyama H,
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    Query Match
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Matches
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                                                                                                                    RESULT 31
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This invention relates to a novel immunogenic composition comprising an ILL-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human companient of the present invention describes human chimeric IL-13 immunogen formulated in an appropriate manner to generate a having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This peptide compositions of the immunocent is a T-cell peptide epitope fused to IL-13 to create an
                                                    immunogenic; IL-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 112; DB 8; 100.0%; Pred. No. 7.8e-12;
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          Tetanus toxin P30 peptide T-cell epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                       30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                                                                                                                                                        28-AUG-2003; 2003WO-GB003729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immunogen of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GLAX ) GLAXO GROUP LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ellis JH, Ashman C;
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                                                                                                                                                                                                                                       Clostridium tetani.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 21 AA;
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          셤
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune IL-13 (interleukin-13) element that is capable of driving an immune cesponse by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatchogical and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatchis. This peptide entremed an antiasthmatic activities.
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                                                                                              immunogenic; IL-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatcological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
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100.0%; Pred. No. 7.8e-12;
iive 0; Mismatches 0;
                                                    Tetanus toxin P30 peptide T-cell epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                               28-AUG-2003; 2003WO-GB003703.
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28-FEB-2003; 2003GB-00004672.
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03-JUN-2004 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GLAX ) GLAXO GROUP LTD. (ASHM/) ASHMAN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ellis JH;
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                                                                                                                                                                                                                                                                              Clostridium tetani.
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Matches 21; Conserv
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Ashman C,

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ADL63947 ID ADL6 XX AC ADL6 XX DT 03-J

RESULT 33

Query Match

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Length 21; Indels 25-MAR-2004

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The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition comprises an immunogen that is capable of generating an immunos response against self interleukin-13 [L-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonucleotide containing at least one unmethylated CG motif and a saponin. The IL-13 immunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a heterologous T-cell epitope which may be incorporated into an IL-13 immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ghrelin, autologous ghrelin, ghrelin analogue; immunogen; immunisation; anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; tetanus toxin; P30 epitope;
 asthma; chronic obstructive pulmonary disease; COPD; atopic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                  Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
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                  hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; T-helper epitope;
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100.0%; Pred. No. 7.8e-12;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; SEQ ID NO 34; 45pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADM06895 standard; protein; 21 AA.
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28-FEB-2003; 2003GB-00004672.
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nes 21; Conservative
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                                                                                                                                                                                                                                                                                                                            Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                                WPI; 2004-239126/22
                                                                                        Clostridium tetani.
                                                      tetanus toxin; P30
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                                                                                                                           WO2004019979-A2
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The invention relates to a method for immunising animals (including humans) against autologous givelin. The method involves presenting ghrelin (or sub-sequence thereof) or a phrelin analogue comprising a ghrelin B-cell epitope and non-ghrelin chemical moieties to the immune system, thereby inducing the production of antibodies against the animal autologous ghrelin. The invention laso relates to immunogenic compositions comprising ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a nucleic acid encoding a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; vectors and host cells comprising this nucleic acid; a method of identifying a modified ghrelin polypeptide capable of inducing a method of the invention. The method of the invention is useful for treating, preventing or ameliorating obseity or other conditions treating, preventing or ameliorating obseity or other conditions contacting that that the total amount of body fat is significantly decreased. The method may also be used for upregulating ghrelin for treatment, prevention or amelioration of anotaxia or cachaxia. The method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                may also be used for treating wound or burns, in adjuvant therapy for in vitro fertitilisation, and for treating ghtelin and ghrelin-receptor related cancers. The present sequence represents the tetanus toxin P30 epitope, a promiscuous T-cell epitope, which may be used in ghrelin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghreling
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100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                              Example 2; SEQ ID NO 8; 83pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADO43876 standard; peptide; 21
                                      12-SEP-2003; 2003WO-DK000592.
                                                                        12-SEP-2002; 2002DK-00001345.
12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          analogues of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21; Conservative
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                                                                                                                                  (PHAR-) PHARMEXA AS
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 21 AA;
                                                                                                                                                                        Boving TEG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-JUL-2004
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Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
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100.0%; Pred. No. 7.8e-12;
iive 0; Mismatches 0;
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19-SEP-2003; 2003WO-JP011974.
                                                            20-SEP-2002; 2002JP-00275264.
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                                                                                                                (CHUS ) CHUGAI SEIYAKU KK.
(SUMU ) SUMITOMO PHARM CO
(SUGI/) SUGIYAMA H.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         aggregation; brain;
Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Masliah
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                            cancer
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Matches
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Gaps

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Indels

Length 21;

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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to amino acids 947-967 of the tetanus toxoid protein used in the method of the invention.
                            Disclosure; SEQ ID NO 10; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The specification describes WII substitution peptides, in which a cysteine residue is substituted with another amino acid residue. The WII substitution peptides have CTL induction activity. Peptides of the invention are used in cancer vaccines, which are applicable in the treatment of e.g. stomach cancer, prostate cancer and ovarian cancer. The present peptide represents a peptide that is mentioned in the
                                                                                                                                                                                                                                                                                                                                                                                        Novel WTI substitution peptides with cysteine replaced by specific amino acid residue and their encoded polynucleotide for cancer vaccines with CTL induction activity for treatment of e.g. stomach cancer and prostate
                                                                                                                                                                                                                                                               Nakatsuka M;
                                                                                                                                                                                                                                                               Kusunose N,
                                                                                                                                                                                                                                                               Samizo F,
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Gaps
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      21;
                     Indels
      Length
                                                                                                                                         Tetanus toxoid amino acids 947-967 for fusion protein.
                     0
     100.0%; Score 112; DB 8; 100.0%; Pred. No. 7.8e-12;
                     Mismatches
                                    21
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                                              FNNFTVSFWLRVPKVSASHLE
                                    1 FNNFTVSFWLRVPKVSASHLE
                                                                                          ADP02884 standard; peptide; 21
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                                                                                                                                                                                                                                                      01-NOV-2002; 2002US-0423012P
                                                                                                                          (first entry)
Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                      (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                             Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                             WPI; 2004-411388/38
                                                                                                                                                                                        Clostridium tetani.
                                                                                                                                                                                                        WO2004041067-A2.
                                                                                                                          12-AUG-2004
                                                                                                                                                                                                                        21-MAY-2004.
                                                                                                           ADP02884;
                                                                                    ADP02884
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The invention relates to a method of preventing (MI) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response

Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or

Disclosure; SEQ ID NO 17; 78pp; English.

beta-amyloid

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The international dendrimer (D) conjugate having aspecific structure arabohydrate dendrimer (D) conjugate having a specific structure containing a functional dendrimer, a residue of a carbohydrate, and a residue of an immunomodulating substance. (CD) is useful in the production of antibodies, as a targeting compound, in medicine, in inhibition of bacterial adhesion, inhibition of toxin action such as e.g. glycosphingolipid-specific VT2 toxins and other such bacterial toxins with binding activities toward cell-surface carbohydrates of the host, or inhibition of carbohydrate-mediated virus entry into host cells, in diapostic assays, in assays for the detection of antibodies against E, and in high-throughput screening. (CD) are useful for treating and/or preventing bacterial diseases such as e.g. infection with bacteria, viral diseases such as infection with HIV, hepatitis or influenza, fungal diseases and certain types of cancer such as carcinomas or melanomas. The method enables fast and efficient synthesis of dendrimer conjugates to having a well-defined chemical structure. This sequence corresponds to a
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against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphapynuclein aggregation. This sequence corresponds to the tetanus toxoid peptide corresponding to amino acid 947-967 used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antibacterial; virucide; fungicide; hepatotropic; anti-HIV; cytostatic; vaccine; bacterial adhesion inhibitor; toxin action inhibitor; carbohydrate dendrimer; immunomodulating substance; HIV; hepatitis; influenza; fungal disease; cancer; carcinoma; melanoma; poliovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthesizing chemoselectively carbohydrate dendrimer conjugate having carbohydrate residue and immunomodulating substance, by identifying chemoselective and carbohydrate residue, and binding residues to
                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a method of synthesizing chemoselectively a
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                                                                                                                                                                                                               Score 112; DB 8;
Pred. No. 7.8e-12;
                                                                                                                                                                                       100.0%; Scor.
100.0%; Pred. No. /...
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                                                                                                                                                                                                                                                                                                                                                                                                                                          ADO24821 standard; peptide; 21 AA.
                                                                                                                                                                                                                                                                                                1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                     07-NOV-2003; 2003WO-DK000766.
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                                                                                                                                                                                                                                                       21; Conservative
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                                                                                                                                                                                                                                  Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2004041310-A1.
                                                                                                                                                                      Sequence 21 AA;
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                                                                                                                                                                                                               Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Generating a population of T-cells specific for an antigen comprises co-
incubating the substantially mature APC population with a population of
CD4+ T-cells, a population of CDS+ T-cells and a target antigen.
                                                                                                                                                                                                                                                                                                                          T-cell; antigen; antigen presenting cell; APC; CD4+; CDS+; virucide; antibacterial; protozoacide; cytostatic; cell therapy; tetanus toxoid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                   Gaps
tetanus toxoid peptide sequence used in the method of the invention.
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                                                       Length
                                                      Score 112; DB 8;
Pred. No. 7.8e-12;
Mismatches 0;
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Pred. No. 7.8e-12;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ORDE-) ORDER OF SISTERS OF MERCY IN QUEENSLAND.
                                                                                                                                                                                                                                                                                                Tetanus toxoid p30 peptide SEQ ID NO:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 1; SEQ ID NO 1; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADP48562 standard; peptide; 21 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Sc
100.0%; Pr
tive 0;
                                                                                   ;
0
                                                                                                                               1 FNNFTVSFWLRVPKVSASHLE
                                                                                                              1 FUNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                             ADP04308 standard; peptide; 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FINETUSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 FNNFTVSFWLRVPKVSASHLE
                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-DEC-2003; 2003WO-AU001647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-DEC-2002; 2002AU-00953238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.vv
                                                                                                                                                                                                                                                                     (first entry)
                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Turtle CJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-468864/44.
                                                                     Similarity
21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                               WO2004053113-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 21 AA;
                             Sequence 21 AA;
                                                                                                                                                                                                                                                                     09-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                          24-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hart DNJ,
                                                                                                                                                                                                                                         ADP04308;
                                                       Query Match
Best Local S
                                                                                   Matches
                                                                                                                                                                                 RESULT 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 41
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SYT-SSX; SS393; tumour antigen peptide; cancer vaccine; cytostatic; cytotoxic lymphocyte induction; synovial sarcoma; tumour; cytostatic; helper peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel mutant peptide of SYT-SSX origin, useful as pharmaceutical composition of cancer vaccine for inducing cytotoxic T cells, and as diagnostic of tumor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 7; 28pp; Japanese.
                                                                     Tetanus toxin helper peptide SeqID 7.
                                                                                                                                                                                                                                                                                                                                                           03-DEC-2002; 2002JP-00350633.
                                                                                                                                                                                                                                                                                                                                                                                                        03-DEC-2002; 2002JP-00350633.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (SATO/) SATO N.
(SUMU ) SUMITOMO SEIXAKU KK.
                      23-SEP-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2004-472266/45.
                                                                                                                                                                                                                   Clostridium tetani.
                                                                                                                                                                                                                                                               JP2004180566-A.
                                                                                                                                                                                                                                                                                                               02-JUL-2004.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a novel chimeric binding protein that is immunogenic in an animal. The chieric binding protein binds specifically to a first receptor that binds a second receptor present in an antigen of the animal, where the chimeric binding protein structure, autologous in the form of a binding site; a scaffold protein structure, autologous in the mammal, that stabilizes the 3D conformation of the binding site; and at least one tolerance breaking amino acid sequence, which is the teast one tolerance breaking amino acid sequence, which is the teast one tolerance breaking amino acid sequence, which is the teast one tolerance breaking amino acid sequence, which is the comprises; a nucleic acid fragment that encodes the chimeric binding protein; a vector carrying the nucleic acid fragment; a transformed cell carrying the vector; a composition for inducing production of antibodies against an antigen in the autologous host comprising the chimeric binding protein in a carling an explosive of the self-antigen in an animal. The chimeric binding protein has cytostatic activity. The chimeric binding protein is useful in preparing a vaccine against e.g. cancer. This sequence represents a 'promiscuous' T-H tetanus toxoid epitope peptide for use in the vaccine of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New chimeric binding protein comprising a B-cell epitope, a scaffold protein structure and a tolerance breaking amino acid sequence, useful in preparing a vaccine against e.g. cancer.
                                                                                                                                                          chimeric binding protein; immunogenic; B-cell epitope; Bcaffold protein structure; major histocompatibility complex; MHC; Class II; cytostatic; vaccine; cancer; promiscuous; tetanus toxoid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 100.0%; Score 112; DB 8; Length 21; Similarity 100.0%; Pred. No. 7.8e-12;
                                                                                                               T-H tetanus toxoid epitope peptide, P30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; SEQ ID NO 2; 61pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                          11-DEC-2003; 2003WO-DK000859.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-DEC-2002; 2002DK-00001893.
11-DEC-2002; 2002US-0432532P.
12-FEB-2003; 2003DK-00000198.
12-FEB-2003; 2003US-0446707P.
                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similaricy
hes 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-468817/44.
                                                                                                                                                                                                                                                                                 Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PHAR-) PHARMEXA AS
                                                                                                                                                                                                                                                                                                                                WO2004052930-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 21 AA;
                                                              09-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouritsen S;
                                                                                                               Promiscuous
                                                                                                                                                                                                                                                                                                                                                                             24-JUN-2004
              ADP48562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                       epitope.
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This invention relates to novel mutant peptides derived from SYT-SSX. Specifically, it refers to a peptide SS393, which is a modified tumour antigen peptide that can be used as the active ingredient in a cancer vaccine. The present invention describes the development of mutant peptides that exhibit increased binding affinity to the HLA-A24 antigen, and as such have a favourable cytotoxic lymphocyte (CTL) induction activity. Accordingly, these peptide epitopes can be used to treat patients suffering from various tumours including synovial sarcoma, and furthermore they exhibit cytostatic activities. This peptide sequence is a helper peptide derived from the tetanus toxin, given in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                   0; Gaps
                                                                                                                                                                                                                                                                                                                       Length 21;
                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                   100.0%; Score 112; DB 8;
100.0%; Pred. No. 7.8e-12;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tetanus toxoid 947-967 epitope AN90550.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB46176 standard; peptide; 28 AA.
                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                           1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                    FINITUS FWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clostridium tetani.
                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                            Sequence 21 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200072880-A2
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                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 43
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Gaps

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Indels

0

Mismatches

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Matches

21 21

1 FNNFTVSFWLRVPKVSASHLE 1 FUNFTVSFWLRVPKVSASHLE

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ADP90538 standard; peptide; 21 AA.

RESULT 42 ADP90538
ID ADP9
XX
AC ADP9

ADP90538

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                                                                                                                                                         This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein ARPP Meta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (For receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease
                                                                                                Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Preventing or treating disease such as Parkinson's disease characterized
                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                            Length 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fusion protein #13 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                 100.0%; Score 112; DB 4; Length 2t
100.0%; Pred. No. 1.1e-11;
.....marches 0; Indels
                                                            Yednock T;
                                                                                                                                        Disclosure; Page 31; 143pp; English
                                                                                                                                                                                                                                                                                                                                                                   77
                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                        ADP02901 standard; peptide; 28 AA
                                                            Vasquez NJ,
                                                                                                                                                                                                                                                                                                                                                                   FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                               FINITIVSFWLRVPKVSASHLE
26-MAY-2000; 2000WO-US014810.
                     99US-00322289.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-2002; 2002US-0423012P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-AUG-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                               21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ELAN-) ELAN PHARM INC.
(REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Masliah E;
                                        (NEUR-) NEURALAB LID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aggregation; brain;
Parkinson's disease.
                                                         Bard F,
                                                                              WPI; 2001-032104/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO2004041067-A2.
                                                                                                                                                                                                                                                                                                        Sequence 28 AA;
                  28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-MAY-2004
                                                          Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
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                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                      antibody
                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 44
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                                                                                                                                                        The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response
                                                                                                                                                                                                                                                                                                                                                   against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
  lies or alpha-synuclein aggregation in brain by administering induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Foreign epitope, P2; prostate specific membrane antigen; vaccination; cytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PSMpep010 - P30 inserted in hPSM insertion position 6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 112; DB 8; 100.0%; Pred. No. 1.1e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                           Disclosure; SEQ ID NO 34; 78pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; Page 117; 220pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 FINFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY92653 standard; peptide; 31 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouritsen S, Nielse
Birk P, Karlsson G;
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98US-0105011P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6. .26
/label= P30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 28 AA;
Lewy bodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200020027-A2
                                 agent that in
beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45
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AAY92650-55 are peptides designed which correspond to the P2 and P30 apitopes with 5 flanking human prostate specific membrane antigen (hPSM) aditopes with 5 flanking amino acida correspond to the apitope insertion sites 6, 8 and 10. The peptides will be used in, e.g. T cell proliferation assays, but also for ELISA or other in vitro assays. The claims detail a method for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (i.e. self-proteins), for example, hPSM, cassociated with cancers (i.e. self-proteins), for example, hPSM, comprises effecting simultaneous presentation by antigen producing calls (APCs) of the animals immune system of: (1) at least 1 CTL (cyctoxic T-lymphocyte) group derived from the PA and/or at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human. Herz and human/murine FGP8b comprising a substantial part of all known at least one foreign to the animal Analogues of human PSM, human. Thelper epitopes (e.g. pz and/or P30) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Foreign epitope, P2; prostate specific membrane antigen; vaccination; cytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
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                                                                                                                                                                                                                                                                                                                                                                                                     Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 112; DB 3; Length 3: 100.0%; Pred. No. 1.2e-11; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PSMpep011 - P30 inserted in hPSM insertion position 8.
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Gautam A, Birk P, Karlsson G;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 FINFTVSFWLRVPKVSASHLE 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY92654 standard; peptide; 31 AA
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/label= P30
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Best Local Similarity 100.0
Matches 21, Conservative
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                                                                                                                                                                                                                                                                                                                                                                Sequence 31 AA;
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CC AAY92650-55 are peptides designed which correspond to the P2 and P30 coptopes with 5 flanking human prostate specific membrane antigen (hPSM) acids in each end. The flanking amino acids correspond to the epitope insertion sites 6, 8 and 10. The peptides will be used in, e.g. The claims detail a method for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (i.e. self-proteins), for example, hPSM, cassociated with cancers (i.e. self-proteins), for example, hPSM, heregulin 2 (HBr2) and/or fibroblast growth factor 8b (FGPBb). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 GTL (cyctoxxic T-lymphocyte) group derived from the PA and/or at least 1 first T helper CC lymphocyte) group derived from the PA and/or at least 1 first T helper CC-lar group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGPBb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope (e.g. P2 and/or P30) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGPBb and Her2, respectively
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Foreign epitope, P2; prostate specific membrane antigen; vaccination; cytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSMpep012 - P30 inserted in hPSM insertion position 10.
                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 3;
100.0%; Pred. No. 1.2e-11;
ive 0; Mismatches 0;
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Birk P, Karlsson G;
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98US-0105011P.
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les 21; Conservative (
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/label= P30
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                                                                                                                                                                                                                                                                                                                                                                             Sequence 31 AA;
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AAY92650-55 are peptides designed which correspond to the P2 and P30
captopes with 5 flanking human prostate specific membrane antigen (hPSM)
amino acids in each end. The flanking amino acids correspond to the
captope insertion sites 6, 8 and 10. The peptides will be used in, e.g. T
cell proliferation assays, but also for ELISA or other in vitro assays.

CC flacials detail a method for inducing immune responses against weakly
immunogenic cell-associated peptide antigens (PA) such as those
associated with cancers (i.e. self-proteins), for example, hPSM,
comprises effecting simultaneous presentation by antigen producing cells
comprises effecting simultaneous presentation by antigen producing cells
(APCs) of the animals immune system of: (1) at least 1 GTL (cytotoxic T-
lymphocyte) group derived from the PA and/or at least 1 first T helper
cell group which is foreign to the animal. Analogues of human PSM, human
Herz and human/murine PGP8b comprising a substantial part of all known
cc and predicted CTL and B-cell epitopes (e.g. P2 and/or P30) are also
claimed. The method is used to treat prostate, prostate/breast or breast
calliamed. The method is used to treat prostate, prostate/breast or breast
call and predicted CTL and B-cell epitope (e.g. P2 and/or P30)
claimed. The method is used to treat prostate, prostate/breast or breast
cancer when the PA is human PSM, FGF8b and Herz, respectively
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "tetanus toxin helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                    Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                              ch 100.0%; Score 112; DB 3; Length 3
1 Similarity 100.0%; Pred. No. 1.2e-11;
21; Conservative 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LHRH-containing immunogenic peptide.
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94US-00229275.
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/note=
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                                                                                                                                                                                                                                                                                                                                                                             Sequence 31 AA;
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10-SEP-1995
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Domain
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Gaps

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Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an consists of (A) a promiscuous helper T cell epitope (Th) which elicits an compute to the coupled peptide in members of a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yershinia. Spacer amino acid sequence from the invasin protein of Yershinia. Spacer amino acid comains and between the immune stimulator and hapten components. When the chapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator component. The present sequence represents an LHRH-containing, invasin-free immunogenic peptide as above which can be used as a potent vaccine for treating e.g. proteatic hyperplasia, androgendependent carcinoma, prostatic carcinoma, testicular carcinoma, cysts, (severe) premenstrual syndrome or oestrogen-dependent breast cancer, or for induction of infertility. (Updated on 25-MAR-2003 to
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloidosis; creactive system cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kutu;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component
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haemodialysis-asssociated beta-2-microglobulin deposition;
amyloid beta peptide; universal T-cell epitope; neuroprotective.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 2; Length 32; 100.0%; Pred. No. 1.3e-11;
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                    Claim 8; Page 84; 213pp; English.
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(first entry)
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Best Local Similarity
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Clostridium tetani.
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27-MAR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 49
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                                                                        The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits camyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders include Alzheimer's disease characterised by amyloid beta apptide fibril deposits, type 2 diabetes characterised by amyloid beta apptide fibril deposits, type 2 diabetes characterised by amyloid beta peptide fibril deposits, tuberculosis) characterised by Antibring derived from serum amyloid A protein (AppSAA); systemic semile amyloid serum amyloid A protein (AppSAA); systemic semile amyloid serum amyloid A protein (AppSAA); systemic semile amyloid serum amyloid A protein (AppSAA); systemic semile amyloid serum amyloid A protein (AppSAA); systemic semile amyloid serum amyloid A protein (AppSAA); systemic semile amyloid serum amyloid A protein (AppSAA); systemic semile amyloid serum amyloid serum amyloid action protein deposits, and beta-2-microglobulin deposits which form as a result of long term haemodialysis treatment. The present sequence composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-SCOOL treatdardise OS field)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 112; DB 4; Length 33; 100.0%; Pred. No. 1.3e-11; tive 0; Mismatches 0; Indels
useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22. .25
/note= "Spacer peptide"
                                         Disclosure; Page 45; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FINETVSFWLRVPKVSASHLE 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 FUNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU11421 standard; peptide; 34 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic immunogen peptide 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0
Marches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia.
Synthetic.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU11421;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 50
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The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide comprising 5 conjugation sites for a pseudopeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
/note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                            Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bauer J, Martin OR, Rodriguez S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 11; Page 7; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FINETVSFWLRVPKVSASHLE
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                                                                                                                                                                                       04-MAY-2001; 2001WO-US014363
                                                                                                                                                                                                                                                  05-MAY-2000; 2000US-0202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunogen of the invention
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                                                                                                                                                                                                                                                                                                                                                                            Michaeli D,
                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-049440/06.
                                                                                                                                                                                                                                                                                                               (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (OMPH-) OM-PHARMA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 34 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200146127-A1
                                                             WO200185763-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or its analog.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-OCT-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-JUN-2001.
                                                                                                                          15-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                            Grimes S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAG63662;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
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New amphiphilic acylated pseudopeptides having a functionalized auxiliary spacer, useful as immunomodulators, e.g. as adjuvants in vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                      Pseudopeptide; immunomodulation; adjuvant; antigen presenting cell; macrophage; dendritic cell; cytokine production; immunocompetent cell; autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                        peptide which may be conjugated to pseudopeptides.
                                                                                                                                                                                                                                                                                                                                          AAG63515 standard; peptide; 36 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rodriguez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-DEC-2000; 2000WO-FR003650.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-IB002038
                                                                                                                                                                                                                                                                                                                                                                       15-OCT-2001 (first entry)
                                                                                                                                                                                                                                                                    21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bauer J, Martin OR,
       WPI; 2001-502469/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VPI; 2001-496651/54
                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (OMPH-) OM-PHARMA.
                                                                                                                                                                                                                                      Sequence 36 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200146126-A1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JUN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                         AAG63515;
                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                    Matches
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The specification describes N-Acylated pseudopeptides, which have a neutral or charged acidic group at one terminal and a functionalized auxiliary spacer at the other. The pseudopeptides show immunomodulatory and adjuvant action, based on activation of antigen presenting cells (e.g. macrophages or dendritic cells), induction and induction of deferentiation of dendritic cells, induction of cytokine production and induction of action of action of cytokine production and induction of action of cytokine production and induction of macuration of manuncompetent cells, induction of cytokine production and induction of and lymphoid organs. They reinforce humoral and cellular immunity. They can be grafted onto antigens (to modulate immune response) or onto drugs (to improve the therapeutic activity or targeting). The pseudopeptides (to improve the therapeutic activity or targeting). The pseudopeptides or diagnostic agents. Typically, the pseudopeptides are used as adjuvants together with (or covalently bonded to) antigens for vacchation against with holod cells ex vivo, to render the cells immunocompetent before reintroduction in vivo; or used in therapy of certain autoimmune continuated to be present expressents a peptide which may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 112; DB 4; 100.0%; Pred. No. 1.4e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    conjugated to pseudopeptides of the invention
                                   Example 3.3; Page 88; 267pp; French.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Conservative
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 36 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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                                                                                                                                                                                                                                                      The specification describes N-Acylated pseudopeptides, which have a neutral or charged acidic group at one terminal and a functionalized auxiliary spacer at the other. The pseudopeptides show immunomodulatory and adjuvant action, based on activation of antigen presenting calls (e.g. macrophages or dendritic cells), induction of differentiation of dendritic cells, induction of cytokine production and induction of maturation of immunocompetent cell strains originating from hematopoeitic and lymphoid organs. They reinforce humoral and cellular immunity. They can be grafted onto antigens (to modulate immune response) or onto drugs (to improve the therapeutic activity or targeting). The pseudopeptides are thus useful in human or veterinary medicine as immunizing or diagnostic agents. Typically, they are used as adjuvants together with correctly bonded to) antigens for vaccination against viral, parastic/protozoal, microbial or fungal infections; incubated with blood cells ex vivo, to render the cells immunocompetent before reintroduction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                    auxiliary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in vivo; or used in therapy of certain autoimmue diseases. The pseudopeptides are useful as carriers for antigens or other therapeutic agents due to their ability to form non-covalent bonds via the hydrophobic or hydrophilic auxiliary spacer. The present sequence represents a peptide, which has 5 possible conjugation sites for the pseudopeptides of the invention
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                                                                                            New amphiphilic acylated pseudopeptides having a functionalized a
spacer, useful as immunomodulators, e.g. as adjuvants in vaccines
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 112; DB 4;
100.0%; Pred. No. 1.4e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                      Example 3; Page 61; 166pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16 FNNFTVSFWLRVPKVSASHLE 36
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Gaps

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Mismatches

71 36

Length 36; Indels

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Preventing or treating disease such as Parkinson's disease characterized
                                                                                                                                                                                                                                                                                                                                                                                                                                 by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in
                                                                                   Tetanus toxoid amino acids 830-844 and 947-967for fusion protein.
                                                                                                             antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 19; 78pp; English.
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ADP02886 standard; peptide; 36
                                                                                                                                                                                                                                                           31-OCT-2003; 2003WO-US034527.
                                                                                                                                                                                                                                                                                     01-NOV-2002; 2002US-0423012P.
                                                      (first entry)
                                                                                                                                                                                                                                                                                                                (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                          Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-411388/38.
                                                                                                                                                                       Clostridium tetani.
                                                                                                                                                                                                 WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             beta-amyloid.
                                                      12-AUG-2004
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the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a linear fusion of the tetanus toxoid peptide corresponding to amino acid 830-844 and 947-967 used in the method of the invention.
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                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 112; DB 8; Length 36; 100.0%; Pred. No. 1.4e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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                                                                                                                                                                                                                                                                                                                                                                                                              21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                   Sequence 36 AA;
                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                              Matches
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The invention relates to a synthetic immunogen for inducing specific antibodies against gonadorropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention

X & X O O O O O O O O O O O O X & O

Sequence 37 AA;

Claim 11; Page 9; 43pp; English.

or its analog.

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Gonadotrophin releasing hormone; GnEH; synthetic immunogen;
luteinising hormone releasing hormone; LHEH; contraceptive;
promiscuous helper T-cell peptide epitope; immunominic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note= "Gonadotrophin releasing hormone epitope"
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11. .16
/note= "Spacer peptide"
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                                          AAU11425 standard; peptide; 37 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     label= OTHER
                                                                                                                                                                                                                                                               Synthetic immunogen peptide
                                                                                                                                                                                         (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia.
Synthetic.
Chimeric.
                                                                                                                AAU11425;
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AAU11425
                                                                                                                THE STATE OF THE S
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Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope

Stevens VC;

Michaeli D,

Grimes S,

(APHT-) APHTON CORP.

WPI; 2002-049440/06.

04-MAY-2001; 2001WO-US014363 05-MAY-2000; 2000US-0202328P

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Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru; haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits
                                                                                                                                                                                                                                                            Amyloid beta/tetanus toxoid immunogenic fusion peptide, SEQ ID NO:12.
                                       Gaps
                                     ;
0
           Length 37;
        Score 112, DB 5; Length 3 Pred. No. 1.5e-11; Mismatches 0; Indels
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0
                                                                              FINETVSFWLRVPKVSASHLE
                                                                                                                                                            AAB49076 standard; peptide; 43
                                                              1 FNNFTVSFWLRVPKVSASHLE
          100.0%;
100.0%;
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                                                                                                                                                                                                                                  (first entry)
Query Match
Best Local Similarity 100.
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Clostridium tetani.
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27-MAR-2001
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component, or an antibody or antibody fragment that binds to an amyloid component, or an antibody or antibody fragment that binds to an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by anyloid beta peptide fibril deposits; type 2 diabetes characterised by islet amyloid protein peptide (IAPP, amylin) fibrils; reactive systemic amyloidosis associated with systemic inflammatory diseases (e.g., theumatodia arthritis, osteomyelitis, tuberculosis) characterised by AA fibrils derived from serum amyloid A protein (ApoSSA)); systemic senile camyloidosis and familial amyloid cardiomyopathy characterised by ATTR (fibrils derived from transthypetin (TTR); transmissble spongiform represents an immunogenic fusion protein comprising an amyloid beta peptide fused fus a universal T-cell epitope which may be used in a composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-2003 to standardise OS field) encephalopathies (e.g. Creutzfeld-Jakob disease, Kuru) characterised by prion protein deposits; and beta-2-microglobulin deposits which form as result of long term haemodialysis treatment. The present sequence

Sequence 43 AA;

Gaps ö Length 43; Indels 100.0%; Score 112; DB 4; 100.0%; Pred. No. 1.8e-11; tive 0; Mismatches 0; Local Similarity 100. es 21; Conservative Query Match Matches

ઠે 셤 RESULT 56

AAB46177 standard; peptide; 43 AA. AAB46177; AAB4617

(first entry) 04-APR-2001

Tetanus toxoid 830-844 + 947-967 epitope AN90542.

Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.

Clostridium tetani.

WO200072880-A2.

07-DEC-2000

26-MAY-2000; 2000WO-US014810.

99US-00322289. 28-MAY-1999;

(NEUR-) NEURALAB LTD.

Yednock T; Vasquez NJ, Bard F, Schenk DB,

WPI; 2001-032104/04.

Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific antibody.

Disclosure; Page 31; 143pp; English

This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the Drain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Fc receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have noctropic and neuroprotective activity. The method is also useful for monitoring a course of treatment methods are useful for prophylactic and therapeutic treatment of Alzheimer's disease

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Sequence 43 AA;

Gaps ö 43; 0; Indels Length Score 112; DB 4; Pred. No. 1.8e-11; Mismatches 100.0%; Scc 100.0%; Pre 21; Conservative Query Match Best Local Similarity Matches 21; Conserva

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21 43 23 FNNFTVSFWLRVPKVSASHLE 1 FUNFTVSFWLRVPKVSASHLE 셤

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ADP02902 standard; peptide; 43

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ADP02902;

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(first entry) 12-AUG-2004 Fusion protein #14 for treating neurodegenerative disorder.

antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; aggregation; brain; i Parkinson's disease.

Synthetic.

WO2004041067-A2.

21-MAY-2004.

31-OCT-2003; 2003WO-US034527.

01-NOV-2002; 2002US-0423012P.

(ELAN-) ELAN PHARM INC. (REGC) UNIV CALIFORNIA.

Schenk DB, Masliah E;

WPI; 2004-411388/38.

eventing or treating disease such as Parkinson's disease characterized Lewy bodies or alpha-synuclein aggregation in brain by administering ent that induces immunogenic response against alpha-synuclein and/or beta-amyloid. Preventing agent

Disclosure; SEQ ID NO 35; 78pp; English.

The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-symuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-symuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-symuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-symuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-symuclein or Abeta

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel pharmaceutical composition for familiar deposits familiar deposits and sease characterised by amyloid fibril deposits familiar bladuce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component, or an antibody or antibody fragment that binds to an amyloid component, or an antibody or antibody fragment that binds to an amyloid prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity of at least four times a base line serum immunoreactivity of at least four times a base line serum immunoreactivity of at least prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders characterised by amyloid fibril deposition in a patient. Such disorders include Alzheimer's disease characterised by
is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasymuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                          Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; cretuzfeld-Jakob disease; Kuru; haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                 Amyloid beta/tetanus toxoid immunogenic fusion protein, SEQ ID NO:26.
                                                                                                                        Gaps
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0
                                                                                           100.0%; Score 112; DB 8; Length 43; 100.0%; Pred. No. 1.8e-11; ive 0; Mismatches 0; Indels
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                                                                                                                                                                43
                                                                                                                                                                                                                                        AAB49090 standard; protein; 44 AA.
                                                                                                                                               1 FNNFTVSFWLRVPKVSASHLE 21
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(first entry)
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Best Local Similarity luv..
Local Similarity luv..
Local Similarity luv..
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Clostridium tetani
                                                                   Sequence 43 AA;
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27-MAR-2001
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                                                                                                                                                                                                               RESULT 58
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amyloid beta peptide fibril deposits; type 2 diabetes characterised by islet amyloid protein peptide (IAPP, amylin) fibrils; reactive systemic amyloidosis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyelitis, tubercullosis) characterised by AA fibrils derived from serum amyloid A protein (ApoSSA); systemic senile amyloidosis and familial amyloid cardiomyopathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform corphalopathies (e.g. Creuuzfeld-Jakob disease, Kuru) characterised by prion protein deposits, and beta-2-microglobulin deposits which form as a result of long term haemodialysis treatment. The present sequence repetised to a universal T-cell epitope which may be used in a composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 112; DB 4; Length 44; 100.0%; Pred. No. 1.8e-11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB46194 standard; peptide; 44 AA.
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Best Local Similarity
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AAU11429 standard; peptide; 50
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                          Gaps
methods are useful for prophylactic and therapeutic treatment of Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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o
                                                                                                                                       Length 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fusion protein #29 for treating neurodegenerative disorder.
                                                                                                                                                                                     Indels
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100.0%; Pred. No. 1.8e-11;
.-- n. Mismatches 0;
                                                                                                               Score 112; DB 4; Fred. No. 1.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 50; 78pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                  ADP02917 standard; peptide; 44 AA.
                                                                                                                                                                                                                                          71
                                                                                                                                                                                                                                                                     24 FINFTVSFWLRVPKVSASHLE 44
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                                                                                                                                                                                                                                       1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                     100.0%;
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                                                                                                                                                                                     21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-411388/38.
                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2004041067-A2
                                                                                  Sequence 44 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 44 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-MAY-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADP02917;
                                                                                                                                  Query Match
Best Local (
                                                                                                                                                                                     Matches
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Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antibodies against gonadotropin releasing hormone (GnRH also known as thetanishing hormons releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer),
                                                                                                           Gonadotrophin releasing hormone, GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                    'note= "Gonadotrophin releasing hormone epitope (1. .10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Gonadotrophin releasing hormone epitope (2-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                              "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                      17. .37
/note= "Tetanus toxoid (947-967 aa)"
                                                                                                                                                                                                                                                                                                                                                                    /nocc-
11. .16
/note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                           'nocc-
/note= "Spacer peptide"
                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 11; Page 11; 43pp; English.
                                                                                   Synthetic immunogen peptide 10.
                                                                                                                                                                                                                                                                                                                                               label= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-MAY-2001; 2001WO-US014363.
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                                                       (first entry)
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/note= "C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aa)"
50
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-049440/06.
                                                                                                                                                                                                                                                                                                                      aa)
                                                                                                                                                                                                 Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                  Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or its analog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Modified-site
                                                       12-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-NOV-2001.
                                                                                                                                                                                                                                Synthetic.
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                                                                                                                                                                                                                 Mammalia.
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21; Conservative

Best Local Similarity

Matches

Query Match

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Gaps

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Indels

Length 44;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru, haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Amyloid beta/tetanus toxoid immunogenic fusion protein, SEQ ID NO:27.
                                                                                                                                                                                Gaps
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                                                                                                                                       100.0%; Score 112; DB 5; Length 50; 100.0%; Pred. No. 2.1e-11; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                            17 FNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                          AAB49091 standard; protein; 51 AA.
                                                                                                                                                                                                                     1 FNNFTVSFWLRVPKVSASHLE 21
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                                                           immunogen of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                        (revised)
(first entry)
                                                                                                                                                                            21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-070921/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
Clostridium tetani.
                                                                                                                                                         Similarity
                                                                                                  Sequence 50 AA;
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27-MAR-2001
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                                                                                                                                       Query Match
Best Local S
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                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                     RESULT 62
                                                                                                                                                                                                                                                                                                                                          AAB49091
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                             composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-2003 to standardise OS field)
amyloid beta peptide fibril deposits; type 2 diabetes characterised by islet amyloid protein peptide (IARP, amylin) fibrils; reactive systemic amyloidosis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by AA fibrils defived from serum amyloid A protein (ApoSSA); systemic senile amyloidosis and familial amyloid cardiomyopathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform
                                                                                                                                      encephalopathies (e.g. Creutzfeld-Jakob disease, Kuru) characterised by prion protein deposits; and beta-2-microglobulin deposits which form as result of long term haemodialysis treatment. The presents enquence represents an immunogent fusion protein comprising an amyloid beta peptide fused to a universal T-cell epitope which may be used in a
                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                100.0%; Score 112; DB 4; Length 51; 100.0%; Pred. No. 2.1e-11;
                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tetanus toxoid epitope fusion construct #15.
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                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                                                                                                                                                       24 FNNFTVSFWLRVPKVSASHLE 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB46195 standard; peptide; 51 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                  1 FNNFTVSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                                                                                                                                        21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                          Sequence 51 AA;
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AAB46195
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24 FNNFTVSFWLRVPKVSASHLE

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New amphiphilic acylated pseudopeptides having a functionalized auxiliary spacer, useful as immunomodulators, e.g. as adjuvants in vaccines.
                                                                                                                                                                                                                                                              Pseudopeptide; immunomodulation; adjuvant; antigen presenting cell; macrophage; dendritic cell; vaccine; autoimmune disease.
                                                                                                                                                                                                                           Peptide comprising 4 conjugation sites for a pseudopeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 3; Page 59; 166pp; French
                                                                                                             AAG63661 standard; peptide; 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-502469/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (OMPH-) OM-PHARMA.
                                                                                                                                                                                                                                                                                                                                                        WO200146127-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                 22-DEC-1999;
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                                                                                                                                                                                      29-OCT-2001
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                                                                                                                                                                                                                                                                                                                     Synthetic.
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                                                                                                                                                    AAG63661;
                                                                            RESULT 65
                                                                                                AAG6366:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                                Gaps
methods are useful for prophylactic and therapeutic treatment of Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                               antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
                                                                                                                                ;
0
                                                                                            Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                          Fusion protein #30 for treating neurodegenerative disorder.
                                                                                                                               Indels
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                                                                                ch 100.0%; Score 112; DB 4; 11 Similarity 100.0%; Pred. No. 2.1e-11; 21; Conservative 0; Mismatches n.
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                                                                                                                                                                 21
                                                                                                                                                                                    24 FNNFTVSFWLRVPKVSASHLE 44
                                                                                                                                                                                                                                                                                              ADP02918 standard; peptide; 51 AA.
                                                                                                                                                                 1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-OCT-2003; 2003WO-US034527
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2004-411388/38.
                                                                                    Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004041067-A2.
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                                                     Sequence 51 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
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                                                                                                                                                                                                                                                            RESULT 64
ADP02918
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Rodriguez S;

Martin OR,

99WO-IB002038. 99WO-IB002038

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The specification describes N-Acylated pseudopeptides, which have a neutral or charged acidic group at one terminal and a functionalized auxiliary spacer at the other. The pseudopeptides show immunomdulatory and adjuvant action, based on activation of antigen presenting cells (e.g. macrophages or dendritic cells), induction of differentiation of dendritic cells, induction of cytokine production of differentiation of dendritic cells, induction of cytokine production of differentiation of macuration of immunocompetent cell strains originating from hematopoeitic and lymphoid organs. They reinforce humoral and cellular immunity. They can be grafted onto antigens (to modulate immune response) or onto drugs (to improve the therapeutic activity or trargeting). The pseudopeptides crethus useful in human or veterinary medicine as immunizing or diagnostic agents. Typically, they are used as adjuvants together with (or covalently bonded to) antigens for vaccination against viral, parasitic/protozoal, microbial or fungal infections; incubated with blood cells extinct the service of the control of the cells immunocompetent before reintroduction in vivo; or used in therapy of certain autoimmune diseases. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agents due to their ability to form non-covalent bonds via the hydrophobic or hydrophilic auxiliary spacer. The present sequence represents a peptide, which has 4 possible conjugation sites for the pseudopeptides of the invention
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Pred. No. 2.5e-11;
Mismatches 0;
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100.0%; Pr
:ive 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 FNNFTVSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 59 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39
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RESULT 66 AAG63513

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Gaps

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Indels

Length 51;

Query Match 100.0%; Score 112; DB 8; Best Local Similarity 100.0%; Pred. No. 2.1e-11; Matches 21; Conservative 0; Mismatches 0;

1 FNNFTVSFWLRVPKVSASHLE 21

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/note= "epsilon amino substituted by Lys in which each of
the alpha and epsilon amino groups is substituted by Lys,
both of the latter two Lys residues being substituted in
each of their alpha and epsilon amino groups by
(NANP) 6QYIKANSKFIGITEFNNFTVSFWLRVPKVSASHLE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New immunogenic branched polypeptide derivs. - used as antigens in enzyme immunoassays and as anti sporozoite vaccines against Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The peptide is a specific example of highly generic immunogenic substituted lysines or polylysines having a number n (where n is 1-15) of L-lysine amino acid residues of alpha and epsilon amide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epsilon amino groups are substituted with polypeptides consisting of one or more plasmodial B epitopes covalently bound to one or more peptides with an amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPKVSASHLEA or QYIKANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anti-plasmodium antibodies in blood, serum and blood-spot samples. Determination can be effected by ELISA. See also AAR14261-2, AAR14264-5 and AAR15316
                                                                                                                                                                                                                                  /note= "epsilon amino substituted by Lys in which both alpha and epsilon amino groups are substituted with the sequence (NANP) 6QYIKANSKFIGITEFNNFTVSFWLRVPKVSASHLE"
                                                                                                                                                                                   /note= "epsilon amino substituted with the R
(NANP) 6QYIKANSKFIGITEFNNFTVSFWLRVPKVSASHLE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 2; Length 63; 100.0%; Pred. No. 2.7e-11; ive 0; Mismatches 0; Indels
     Immunogen; Plasmodium; malaria; lysine; immunoassay.
                                                                            Location/Qualifiers
                                                                                               25. .38
/label= T epitope
                                                                                                                                                 /label= T epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 10; Page 15; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FINETVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91EP-00200727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90IT-00019914.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1991-297504/41.
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 63 AA;
                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                     Modified-site
                                                                                                                                                                                                                                                                                          Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-MAR-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32-APR-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-OCT-1991.
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                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pessi A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR14261;
                                                                                               Region
                                                                                                                                  Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 68
                                                                              Key
V
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        neutral or charged acidic group at one terminal and a functionalized auxiliary spacer at the other. The pseudopeptides show immunomodulatory and adjuvant action, based on activation of antigen presenting cells of e.g. macrophages or dendritic cells, induction of differentiation of manuscompenent cells, induction of cytokine production and induction of manuscompenent cells, induction of contraction of immunocompenent cells, induction of manuscompenent cells, induction of manuscompenent cells, induction of contraction of immunocompenent cells, induction and induction of manuscompenent cells, induction of immunocompenent cells, induction and induction of immunocompenent cells, induction activity or targeting. The pseudopeptides are thus useful in human or veterinary medicine as immunizing or diagnostic agents. Typically, the pseudopeptides are used as adjuvants together with (or covalently bonded to) antigens for vaccination against viral, parasitic/protozoal, microbial or fungal infections; incubated with blood cells sa vivo, to render the cells immunocompetent before
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           auxiliary
                                                                                                                                          Pseudopeptide; immunomodulation; adjuvant; antigen presenting cell; macrophage; dendritic cell; cytokine production; immunocompetent cell; autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The specification describes N-Acylated pseudopeptides, which have a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New amphiphilic acylated pseudopeptides having a functionalized au spacer, useful as immunomodulators, e.g. as adjuvants in vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     diseases. The present sequence represents a peptide which may be conjugated to pseudopeptides of the invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 112; DB 4; Length 59; 100.0%; Pred. No. 2.5e-11; ive 0; Mismatches 0; Indels
                                                                                                        A peptide which may be conjugated to pseudopeptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 3.2; Page 87; 267pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                  Rodriguez S;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR14263 standard; peptide; 63 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNFTVSFWLRVPKVSASHLE 21
AAG63513 standard; peptide; 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   39 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                         21-DEC-2000; 2000WO-FR003650.
                                                                                                                                                                                                                                                                                                                                                             99WO-IB002038
                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 100.0
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-JAN-1992 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                    Martin OR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-496651/54.
                                                                                                                                                                                                                                                                                                                                                                                                (OMPH-) OM-PHARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 59 AA;
                                                                                                                                                                                                                                                  WO200146126-A1.
                                                                                                                                                                                                                                                                                                                                                             22-DEC-1999;
                                                                       15-0CT-2001
                                                                                                                                                                                                                                                                                        28-JUN-2001
                                                                                                                                                                                                                   Synthetic.
                                   AAG63513;
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Bauer J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 67
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Gaps

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the invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin basequence thereof) or a ghrelin analogue comprising a ghrelin becall epitope and non-ghrelin chemical moieties to the immune ghrelin B-cell epitope and non-ghrelin chemical moieties to the immune compositions comprising the production of antibodies against the animal s autologous ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a nucleic acid a canalogue of the invention; a nucleic acid a method of identifying a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin; and use of immunogenic compositions of the invention. The method of the invention is useful for treating, preventing or ameliorating obesity or other conditions confracting by access body fat deposits by downregulating ghrelin to such an extent that the total amount of body fat is significantly contact the total amount of body fat is significantly contact the contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of another contact of anot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               may also be used for treating wound or burns, in adjuvant therapy for in vitro fertilisation, and for treating ghrelin and ghrelin-receptor related cancers. The present sequence represents a ghrelin analogue
  Ghrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation; anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; rat; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               comprising mature rat ghrelin with added epitopes used in an example of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
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Pred. No. 2.8e-11;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; SEQ ID NO 15; 83pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                    L2-SEP-2003; 2003WO-DK000592.
                                                                                                                                                                                                                                                                                                                                                                                                                          12-SEP-2002; 2002DK-00001345.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antibodies against ghrelin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Klysner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (PHAR-) PHARMEXA AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                      WO2004024183-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 64 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Boving TEG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-JAN-1992
                                                                                                                                                                                                                                                                                                             25-MAR-2004
                                                                                                                                                                      Rattus sp.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR14265;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 70
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        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 日菜足菜品菜.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The peptide is a specific example of highly generic immunogenic substituted lysines or polylysines having a number n (where n is 1-15) of L-lysine amino acid residues of alpha and epsilon anide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epsilon amino groups and/or (n+1)/2 of the epsilon amino groups and/or (n+1)/2 of the epsilon amino groups and/or (n+1)/2 of the epsilon amino groups and/or (n+1)/2 of the epsilon amino amino adjustmedial B epitopes covalently bound to one or more peptides with an amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPRVSARHLEA or QTIKANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anni-plasmodium antibodies in blood, serum and blood-spot samples. Determination can be effected by ELISA. See also AAR14262 - AAR14265 and AAR15436
                                                                                                                                                                                                                                                                                                                                                                                                               /note= "epsilon-amino group substituted with Lys in which both alpha and epsilon amino groups are substituted with the sequence FNNFTVSFWLRVPKVSASHLE(NANP)10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New immunogenic branched polypeptide derivs. - used as antigens in enzyme immunoassays and as anti sporozoite vaccines against Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                    substituted with the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mature rat ghrelin with added epitopes (peptide 3), SEQ ID NO:15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                      Immunogenic branched polypeptides for antimalarial vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                             [mmunogen; Plasmodium; malaria; lysine; immunoassay.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 112; DB 2; Best Local Similarity 100.0%; Pred. No. 2.8e-11; Matches 21; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                 /note= "epsilon-amino substitu
FNNFTVSFWLRVPKVSASHLE(NANP)10
                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADM06902 standard; peptide; 64 AA.
                                                                                                                                                                                                                                                    1. .21
/label= T epitope
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Corradin G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 8; Page 15; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNFTVSFWLRVPKVSASHLE
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(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bianchi E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1991-297504/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 64 AA;
                                                                                                                                                                                                                                                                                                       Modified-site
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14-JAN-1992
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                                                                                                                                                                Synthetic
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                         Key
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The peptide is a specific example of highly generic immunogenic substituted lysines or polylysines having a number n (where n is 1-15) of L-lysine amino acid residues of alpha and epsilon anide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epsilon amino groups and/or (n+1)/2 of the application of the epsilon amino groups are substituted with polypeptides consisting of one or more palsamodial B epitopes covalently bound to one or more peptides with an amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPKVSASHLEA or QYIKANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anti-plasmodium antibodies in blood, serum and blood-spot samples. Determination can be effected by ELISA. See also AAR14261 - AAR14264, AAR14266 and AAR15436
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                                                                                                                                      /note= "epsilon amino substituted with Lys in which alpha and epsilon amino groups are each substituted with the sequence FNNFTVSFWLRVFKVSASHLE(NANP)10K"
                                                                                                                                                                                                                                                                                                                              New immunogenic branched polypeptide derivs. - used as antigens in enzyme immunoassays and as anti sporozoite vaccines against Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                       /note= "epsilon amino substituted with the sequence FNNFTVSFWLRVPEVSSASHLE(NANP)10K "
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Immunogenic branched polypeptides for antimalarial vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Immunogenic branched polypeptides for antimalarial vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 65;
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                     Immunogen; Plasmodium; malaria; lysine; immunoassay
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunogen; Plasmodium; malaria; lysine; immunoassay
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 112; DB 2;
Pred. No. 2.8e-11;
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                                                               Location/Qualifiers
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|abel= T epitope
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                                                                                                                                                                                                                                                                                                                                                                      Claim 13; Page 16; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Sc
100.0%; Pr
tive 0;
                                                                                                                                                                                                                                                                                       Corradin
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                                                                                                                                                                                                                         91EP-00200727
                                                                                                                                                                                                                                             90IT-00019914
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                                                                                                                                                                                                                                                                 (ENIE ) ENIRICERCHE SPA
                                                                                                                                                                                                                                                                                      Pessi A, Bianchi E,
                                                                                                                                                                                                                                                                                                          WPI; 1991-297504/41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 65 AA;
                                                                                            Modified-site
                                                                                                                           Modified-site
                                                                                                                                                                                                                       28-MAR-1991;
                                                                                                                                                                                                                                            02-APR-1990;
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                                          Synthetic.
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                                                                         Region
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                                                                                                                                                                                                                                                                                                                                        /note= "epsilon amino substituted by Lys in which both the alpha and epsilon amino groups are substituted with further Lys residues, the latter two Lys residues each being substituted on the alpha amino by FNNFTVSFWIARVEXCASHL. E(KANP)10 and on the epsilon amino by the sequence VQGEESNDK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The peptide is a specific example of highly generic immunogenic substituted lysines or polylysines having a number n (where n is 1-15) of 1-19sine amino acid resaddues of alpha and egalion anide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epsilon amino groups and/or (n+1)/2 of the epsilon amino groups are substituted with polypeptides consisting of one or more plasmodial B epitopes covalently bound to one or more peptides with an amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPKVSASHLEA or QYTKANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anti-plasmodium antibodies in blood, serum and blood spot samples. Determination can be effected by ELISA. See also AAR14262 - AAR14265 and AAR15436
                                                                                                                                                                                               /note= "epsilon amino substituted by Lys in which the alpha amino is substituted with the sequence TENNTTVSFWIRVSPRICE(NANP) 10 and the epsilon amino is substituted with the sequence VQGEESNDK"
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                                                                                  /note= "epsilon amino substituted by the sequence
VQGBESNDK"
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100.0%; Pred. No. 2.8e-11;
ive 0; Mismatches 0;
Location/Qualifiers
                                                   'label= T epitope
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNFTVSFWLRVPKVSASHLE
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21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pessi A, Bianchi E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1991-297504/41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 65 AA;
                                                                                  Modified-site
                                                                                                                                                                    Modified-site
                                                                                                                                                                                                                                                                                                                   Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-MAR-1991;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-APR-1990;
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Best Local S
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Mature ghrelin with added epitopes (peptide 4), SEQ ID NO:16.

17-JUN-2004 (first entry)

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Ghrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation; anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; epitope.
                                                                                                                                                                                                                                                                              Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin.
Mature ghrelin with added epitopes (peptide 5), SEQ ID NO:17.
                                                                                                                                                                                                                                                                                                                                   Example 1; SEQ ID NO 17; 83pp; English.
                                                                                                                                                           12-SEP-2003; 2003WO-DK000592.
                                                                                                                                                                               2002DK-00001345.
2002US-0410164P.
                                                                                                                                                                                                                                     Boving TEG, Klysner S;
                                                                                                                                                                                                                                                       WPI; 2004-329403/30.
                                                                                                                                                                                                              PHAR-) PHARMEXA AS
                                                                                                                  WO2004024183-A1.
                                                                                  Synthetic.
Unidentified.
                                                                                                                                                                               12-SEP-2002;
                                                                                                                                                                                           12-SEP-2002;
                                                                                                                                       25-MAR-2004.
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The invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin (or sub-sequence thereof) or a ghrelin manleque comprising a ghrelin are leaders comprising a ghrelin. The invention of antibodies against the system, thereby inducing the production of antibodies against the system, thereby inducing the production of antibodies against the smalled is autologous ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; vectors and host cells comprising this nucleic acid; a method of identifying a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin; and use of immunogenic compositions of the invention. The method of the invention is useful for treating, preventing or amelioration obesity or other conditions characterised by excess body fat deposits by downregulating ghrelin to such an extent that the total amount of body fat is significantly decreased. The method may also be used for upregulating ghrelin for the treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for treating wound or burns, in adjuvant therapy for in viro fertilisation, and for treating sphrelin and ghrelin analogue comprises comprising mature ghrelin with added epitopes used in an example of the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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21
                         FINIFTVSFWLRVPKVSASHLE
                                  FINETVSFWLRVPKVSASHLE
                                          46
Best Loca
Matches
                                                                  RESULT 73
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ADM06903 standard; peptide; 68 AA.

ADM06903

ADM06903;

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The invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting a ghrelin for a ghrelin analogue comprising a ghrelin for a ghrelin analogue comprising a ghrelin breels poitope and non-ghrelin chemical moieties to the immune system, thereby inducing the production of antibodies against the animal's autologous ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; vectors and host cells comprising this nucleic acid; a method of identifying a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin, and use of immunogenic compositions of the invention. The method of the invention is useful for treating, preventing or ameliorating obesity or other conditions treating preventing or ameliorating obesits by downregulating ghrelin to such an extent that the total amount of body fat is significantly decreased. The method may also be used for upregulating ghrelin for the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for treating wound or burns, in adjuvant therapy for in vitro fertilisation, and for treating ghrelin and ghrelin-receptor related cancers. The present sequence represents a phrelin analogue comprising mature ghrelin with added epitopes used in an example of the
                                                                              Ghrelin, autologous ghrelin, ghrelin analogue; immunogen; immunisation; anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing
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Pred. No. 3e-11;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; SEQ ID NO 16; 83pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                12-SEP-2002; 2002DK-00001345.
12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                           12-SEP-2003; 2003WO-DK000592.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antibodies against ghrelin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                (PHAR-) PHARMEXA AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                        WO2004024183-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 68 AA;
                                                                                                                                                                                                                              Unidentified.
                                                                                                                                                                                                                                                                                                                 25-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Boving TEG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB46190
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04-APR-2001

AAB46190;

28-MAY-1999;

Schenk DB,

antibody

07-DEC-2000

us-09-806-703a-14.rag

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The invention relates to a method of preventing (MI) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "epsilon amino substituted with Lys in which alpha and epsilon amino groups are each substituted with the sequence (NANP)3FNNFTVSFWLRVDFVSASHLE(NANP)10K"
                                                                                                                                                                                                                                                                                                                                 Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "epsilon amino substituted with the sequence (NANP) 3FNNFTVSFWLRVPKVSASHLE (NANP) 10K"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Immunogenic branched polypeptides for antimalarial vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 8; Length 7.
100.0%; Pred. No. 3.3e-11;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunogen; Plasmodium; malaria; lysine; immunoassay,
                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; SEQ ID NO 30; 78pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ä.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label= T epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR14264 standard; peptide; 77
                                                                                      31-OCT-2003; 2003WO-US034527.
                                                                                                                                  01-NOV-2002; 2002US-0423012P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21; Conservative
                                                                                                                                                                            (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                             Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                       WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
  WO2004041067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 74 AA;
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                                            21-MAY-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR14264;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Key
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Foreepptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                    Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fusion protein #9 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 4;
100.0%; Pred. No. 3.2e-11;
iive 0; Mismatches 0;
                                                                               Tetanus toxoid epitope fusion construct #10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yednock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 32; 143pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vasquez NJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FINITUSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADP02897 standard; peptide; 74
                                                                                                                                                                                                                                                                                                                                               26-MAY-2000; 2000WO-US014810.
                                                                                                                                                                                                                                                                                                                                                                                              99US-00322289
                                  (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                     (NEUR-) NEURALAB LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-032104/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bard F,
                                                                                                                                                                                                               Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                         WO200072880-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 72 AA;
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Alzheimer's

Query Match Matches 12-AUG-2004

ADP02897;

22

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Synthetic.

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Gaps

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EP450715-A.

Length 74;

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                                                                                                                                                                                  The peptide is a specific example of highly generic immunogenic substituted lysines or polylysines having a number n (where n is 1-15) of L-lysine amino acid residutes of alpha and epsilon anide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epsilon amino groups are substituted with polypeptides consisting of one or more plasmodial B epitopes covalently bound to one or more peptides with an amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPKVSASHLEA or QTIKANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anti-Plasmodium antibodies in blood, serum and blood-spot samples. Determination can be effected by ELISA. See also AAR14261 - AAR14263, AAR14265 and AAR15436
                                                                                                                            New immunogenic branched polypeptide derivs. - used as antigens in enzyme immunoassays and as anti sporozoite vaccines against Plasmodium
                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
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                                                                                                                                                                                                                                                                                                                                      Length 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fusion protein #27 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                     100.0%; Score 112; DB 2;
100.0%; Pred. No. 3.4e-11;
ive 0; Mismatches 0;
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                                                                                                                                                                  Claim 11; Page 16; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                           1 FUNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                              ADP02915 standard; peptide; 79
                            91EP-00200727
                                               90IT-00019914.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-2002; 2002US-0423012P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-OCT-2003; 2003WO-US034527
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                                                                                                                                                                                                                                                                                                                                              Local Similarity 100.
                                                                 (ENIE ) ENIRICERCHE SPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Masliah E;
                                                                                      Bianchi E,
                                                                                                        WPI; 1991-297504/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                  Sequence 77 AA;
                            28-MAR-1991;
                                               02-APR-1990;
          09-OCT-1991.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-MAY-2004.
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                                                                                                                                               falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADP02915;
                                                                                      Pessi A,
                                                                                                                                                                                                                                                                                                                                     Query Match
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reventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapa
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fusion protein #8 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 112; DB 8; 100.0%; Pred. No. 3.5e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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                                                                                                                                                                                          Disclosure; SEQ ID NO 48; 78pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 79 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              beta-amyloid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADP02896;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
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the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response improves motor characteristics of the patient, and the administration in useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "identical to residues 267-314 of human GDF-8"
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/note= "identical to residues 336-375 of human GDF-8"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia;
cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin;
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                                                                                                                                                                                                             100.0%; Score 112; DB 8; Length 101; 100.0%; Pred. No. 4.7e-11; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "tetanus toxoid P2 epitope"
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                                                                                                                                                                                                                                                                                                                                                                         AAB20149 standard; protein; 109 AA.
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                                                                                                                                                                                                                                                                                       20-JUL-2000; 2000WO-DK000413.
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99US-0145275P
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                                                                                                                                                                                                                         Local Similarity 100.
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/note=
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Clostridium tetani.
Synthetic.
Chimeric.
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                                                                                                                                                                                 Sequence 101 AA;
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26-JUL-1999;
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Matches
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The present sequence is that of AutoVac construct GDF-8 p30-2, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 49-69 are replaced by the promiscuous tetanus toxin T-cell epitope 200 (see AAB20144). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can europhy is pronounced and for patients suffering from acute and chronic heart failure
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/note= "identical to residues 267-349 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
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/note= "optionally replaced by Glu-Gly"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 112; DB 4;
Pred. No. 5.1e-11;
Mismatches 0;
                         Example 1; Page 101-102; 110pp; English.
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Matches 21; Conservative
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Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 109 AA;
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differentiation factor 8 (GDF-8) in which residues of human growth differentiation factor 8 (GDF-8) in which residues 84-104 are replaced by the promiscuous tetanus toxin T-cell epitope 810 (see AAB20144). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-33) are capable of breaking autocolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-canditives. Anti-GDF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart failure
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                                                                                                                        Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
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/note= "identical to residues 267-345 of human GDF-8"
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                                                                                                                                                                                                                                      present sequence is that of AutoVac construct GDF-8 P30-3B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 109;
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90. .91
/note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 112; DB 4;
100.0%; Pred. No. 5.1e-11;
ive 0; Mismatches 0;
                                                      Mouritsen S, Klysner S;
                                                                                                                                                                                                  Example 1; Page 104; 110pp; English
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                  (MEBI-) M & E BIOTECH AS
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                                                                                      WPI; 2001-112680/12
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Clostridium tetani.
Synthetic.
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                                               Halkier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB20150;
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The present sequence is that of AutoVac construct GDF-8 P30-3A, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 79-99 are replaced by differentiation factor 1-cell epitope P30 (see AAB20144). It is an collect of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the Cterminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal discurbance of the authentic 3-dimensional structure of the protein.

Wholeic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used for reat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart failure
                                                                                                                                                                                                                                                                                                        Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
/note= "identical to residues 366-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 112; DB 4; Length 109; 100.0%; Pred. No. 5.1e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indele
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                                                                                                                                                                                                                                                                                                                                                                               Example 1; Page 102-103; 110pp; English
                                                                                                                                                                                                                                    Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FINITIONS FWLRV PKVSASHLE 99
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                                                                                                                                            99DK-00001014
                                                                                                         20-JUL-2000; 2000WO-DK000413
                                                                                                                                                           99US-0145275P
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                                                                                                                                                                                                                                   Halkier T, Mouritsen S,
                                                                                                                                                                                                 (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
Clostridium tetani.
Synthetic.
Chimeric.
                                                                                                                                                                                                                                                                      WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 109 AA;
                                     WO200105820-A2.
                                                                                                                                            20-JUL-1999;
                                                                                                                                                           26-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-APR-2001
                                                                       25-JAN-2001
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The present sequence is that of AutoVac construct GDF-8 P30-1, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 2-41 are replaced by the promiscuous tetanus toxin T-cell epitope P30 (see AAB20144). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-5) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the encidence of animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can atrophy is pronounced and for patients suffering from acute and chronic heart failure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
.. .20
'note= "identical to residues 267-286 of human GDF-8"
                                                                                 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric human IL-13 protein with tetanus toxin p30 peptide SegID 11.
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                                                                                                             /note= "Cys-73 may be substituted by Ser disulfide bond formation"
                                                                                                                                                90. .91
/note= "optionally replaced by Glu-Gly"
                                                                                 'note= "identical to residues 307-375
                              21. .41
/note= "tetanus toxoid P2 epitope"
42. .109
                                                                                                                                                                                                                                                                                                                                                                                        Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Page 99; 110pp; English.
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99US-0145275P.
                                                                                                                                                                                                                                                                   20-JUL-2000; 2000WO-DK000413
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                                                                                                                                                                                                                                                                                                                                                                                      Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 100.
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                    (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-112680/12.
                                                                                                 Misc-difference
                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 109 AA;
                                                                                                                                                                                                WO200105820-A2.
                                                                                                                                                                                                                                                                                                   20-JUL-1999;
26-JUL-1999;
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                                                                                                                                                                                                                                   25-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                      Halkier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADL63984;
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Region
                               Region
                                                               Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 83
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This invention relates to a novel immunogenic composition comprising an response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate chuman vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS) As such, these compositions, which exhibit dermatological and antiasthmatic accivities, can be used via gene therapy to transmit disease (COPD), asthma or susceptible to chronic obstructive sequence is the chimeric human IL-13 protein containing a tetanus p30 peptide (immunogen 2) of the invention.
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human; immunogenic; IL-13; interleukin-13; vaccine;
airway hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 112; DB 8;
Pred. No. 5.7e-11;
; Mismatches 0;
                                                                                                                                                                                                                          /note= "Tetanus P30 peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; SEQ ID NO 11; 89pp; English.
                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADL63908 standard; protein; 121 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ch 100.0%; 1 Similarity 100.0%; 21; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                               30-AUG-2002; 2002GB-00020212.
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                                                                                              28-AUG-2003; 2003WO-GB003703
                                                                                                                                                                                                                                                                                                                                                                                                                 (GLAX ) GLAXO GROUP LTD (ASHM/) ASHMAN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ellis JH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-239121/22.
                                                                                                                       Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 121 AA;
                                                                                                                                                                                                                                                           WO2004019974-A2.
                                                                                                                                                                                                                                                                                             11-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ashman C,
                                                                                                                                                         Chimeric.
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                                                                                                                                                                                                        Peptide
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ADL63908
ID ADL63:
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AC ADL63:
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us-09-806-703a-14.rag

(first entry)

03-JUN-2004

ADL97891;

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human; immunogenic; IL-13; interleukin-13; vaccine;
airway hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30.
                   Chimeric human IL-13 protein with tetanus toxin p30 peptide SegID 11.
                                                                                                                                                                                                                                                                                                                                                                      New vaccine composition useful for treating asthma, Chronic obstructipulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                        74. .94
/note= "Tetanus P30 peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; SEQ ID NO 11; 89pp; English.
                                                                                                                                                        Location/Qualifiers 74. .94
                                                                                                                                                                                                                                                                      30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                 28-AUG-2003; 2003WO-GB003729
(first entry)
                                                                                                                                                                                                                                                                                                       (GLAX ) GLAXO GROUP LID
                                                                                                                                                                                                                                                                                                                            Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-239122/22.
                                                                                                                    omo sapiens.
lostridium tetani.
                                                                                                                                                                                                       WO2004019975-A2
03-JUN-2004
                                                                                                                                                                                                                            11-MAR-2004.
                                                                                                                                        Chimeric.
                                                                                                                                                                        Peptide
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This invention relates to a novel immunogenic composition comprising an immune cresponse by recognising human II-13 and one or more foreign T-cell cepitopes. Specifically, it refers to a method for producing a human chimeric II-13 immunogen formulated in a appropriate manner to generate a human vaccine. The present invention describes human chimeric II-13 sequences as having a similar conformational shape to native human II-13 conformational shape to native human II-13 conformational shape to native human II-13 conformational shape to mature human iII-13 conformation in airway hyper-responsiveness (ARR), conformation and state in a reduction in airway hyper-responsiveness (ARR), conformation hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the method results in a reduction in airway hyper-responsiveness (ARR), concus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene theorapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide cortices is the chimeric human II-13 protein containing a tetanus p30 sequence is the chimeric human IL-13 pr peptide (immunogen 2) of the invention

Sequence 121 AA;

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                     Gaps
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0
 Length 121;
                   Indels
Score 112; DB 8;
Pred. No. 5.7e-11;
Mismatches 0;
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100.0%;
                   21; Conservative
         Local Similarity
Query Match
          Best Loca
Matches
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Gaps

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21; Conservative

Matches

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71 94 FUNFTVSFWLRVPKVSASHLE FINITUS FWLR V PKV SASHLE ч 74

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AAB45524 standard; protein; 122 AA.

AAB45524

26-FEB-2001 (first entry)

AAB45524;

HXXXH

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ADL97891 standard; protein; 121 AA.
RESULT 85
              ADL97891
ID ADL9
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The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition comprises an immunogen that is capable of generating an immune response against self interleukin-13 (IL-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonuclectide containing at least one unmethylated G motif and a saponin. The IL-13 minunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatities.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      eprivee, the vaccine composition is useful for freating astima or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a human IL-13/tetanus toxin P30 epitope immunogen of the invention.
                                                                                                                         Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermaticlogical; human; T-helper epitope; tetanus toxin; P30; mutant; mutein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vaccine composition useful for treating asthma, Chronic Obstructive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
                                                                                         Human IL-13/tetanus toxin P30 epitope immunogen 2, SEQ ID NO:11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 8; Length 1 100.0%; Pred. No. 5.7e-11; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                              74. .94
/note= "Tetanus toxin P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID NO 11; 45pp; English.
                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-AUG-2003; 2003WO-GB003721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GLAX ) GLAXO GROUP LTD.
                                                                                                                                                                                                                                                Homo sapiens.
Clostridium tetani.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ashman C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-239126/22.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                   WO2004019979-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                         11-MAR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ellis JH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                            Region
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Chronic obstructive

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airway hyper-responsiveness, AHR, mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; chimeric; tetanus p30.
                                                                                                                                                               Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                           The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chimeric human IL-13 protein with a tetanus toxin p30 peptide SegID 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human; immunogenic; IL-13; interleukin-13; vaccine;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 112; DB 3;
Pred. No. 5.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77. .97
/note= "Tetanus P30 peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                         Example 7; Page 134; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADL63986 standard; protein; 123 AA.
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                 99US-0132811P.
99DK-00000552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-AUG-2002; 2002GB-00020212.
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-AUG-2003; 2003WO-GB003703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21; Conservative
                                                      (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                            helminthic infections
                                                                                                                                WPI; 2000-672791/65.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ashman C, Ellis JH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
Clostridium tetani.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 122 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO2004019974-A2
                 06-MAY-1999;
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                                                                                             Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADL63986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     e treated
In addition,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interlevin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition it is possible that they may be used in the treatment of cancer and
                                                Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 3;
100.0%; Pred. No. 5.8e-11;
ive 0; Mismatches 0;
           Modified murine interleukin-5 SEQ ID NO: 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Modified murine interleukin-5 SEQ ID NO: 19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 7; Page 156; 172pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB45507 standard; protein; 122 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                          99DK-00000552,
99US-0132811P.
                                                                                                                                                                                                                                       19-APR-2000; 2000WO-DK000205
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nes 21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                (MEBI-) M & E BIOTECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           helminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-672791/65.
                                                                                                                          Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 122 AA;
                                                                                                                                                             WO200065058-A1.
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                                                                                                        Mus musculus.
                                                                                                                                                                                                                                                                          23-APR-1999;
                                                                                                                                                                                                                                                                                             06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 musculus
                                                                                                                                                                                                  02-NOV-2000
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                                                                                                                                                                                                                                                                                                                                                                     Klysner S;
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Best Loca Matches

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Gaps

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Length 122; Indels

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03-JUN-2004
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                              Ellis JH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADL97893;
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Region
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                                                                                                                               This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 equences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian appecies, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, gobte cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide gequence is the chimeric human IL-13 protein containing a tetanus p30 peptide (immunogen 4) of the invention.
                                         New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             airway hyper-responsiveness, AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimeric human IL-13 protein with a tetanus toxin p30 peptide SeqID 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 112; DB 8; Length 123; 100.0%; Pred. No. 5.8e-11; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human; immunogenic; IL-13; interleukin-13; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "Tetanus P30 peptide"
                                                                                                      Disclosure, SEQ ID NO 13; 89pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADL63910 standard; protein; 123 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FINETVSFWLRVPKVSASHLE 97
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28-FEB-2003; 2003GB-00004672.
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              WPI; 2004-239121/22
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Clostridium tetani.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
les 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 123 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
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Matches
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This invention relates to a novel immunogenic composition comprising an Inla invention relates to a novel immunogenic composition on immune response by recognising human IL-13 and one or more foreign T-cell cepitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate channer of a human vaccine. The present invention describes human chimeric IL-13 cequences as having a similar conformational shape to native human IL-13 con-human mammanian species, to enhance its immunogenicity, actributable to con-human mammanian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticostercide (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human IL-13 protein containing a tetanus p30
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                                                                                                                                                                        New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Murine IL-13/tetanus toxin P30 epitope immunogen 4, SEQ ID NO:13.
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                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 13; 89pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADL97893 standard; protein; 123 AA.
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Matches 21, Conservative
(GLAX ) GLAXO GROUP LTD.
                                                            Ashman C;
                                                                                                                  WPI; 2004-239122/22.
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Chimeric.
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Gaps

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                            Modified human interleukin-5 SEQ ID NO: 8.
                                                                                              Disclosure; SEQ ID NO 13; 45pp; English.
                                                                                                                                                                                                                                                                                 77 FNNFTVSFWLRVPKVSASHLE 97
                                                                                                                                                                                                                                                                                                                             AAB45496 standard; protein; 124
                                                                                                                                                                                                                                                                      1 FUNFTVSFWLRVPKVSASHLE
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99US-0132811P
                                                                                                                                                                                                       immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                      21; Conservative
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              (GLAX ) GLAXO GROUP LTD
                               Ashman C;
                                               WPI; 2004-239126/22.
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                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                             Clostridium tetani.
                                                                                                                                                                                                                      Sequence 123 AA;
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                              Ellis JH,
                                                                                                                                                                                                                                                                                                                                             AAB45496;
                                                                                                                                                                                                                                                     Matches
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                                                                                                                                                                                                                                                                                                             RESULT 91
AAB45496
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                        The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                          Length 124;
                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                       100.0%; Score 112; DB 3;
100.0%; Pred. No. 5.9e-11;
Nismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified human interleukin-5 SEQ ID NO: 30.
    Example 7; Page 124; 172pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB45515 standard; protein; 124 AA
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99US-0132811P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                  helminthic infections
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                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
Clostridium tetani.
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                                                                                                                                                                                                                                            Sequence 124 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB45515;
                                                                                                                                                                                                                                                                                                                                                                                                                 32
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    8X000000000X8
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                                                                                                                                                                                                                                                                                            The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition occuprises an immunogen that is capable of generating an immune response against self interleukin-13 (IL-13) and am adjuvant composition comprising a combination of an immunostimulatory oligonuclectide containing at least one unmethylated CG motif and a saponin. The IL-13 immunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a murine IL-13/tetanus toxin P30 epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
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100.0%; Pred. No. 5.8e-11;
ive 0; Mismatches 0;
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28-FEB-2003; 2003GB-00004672.
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Length 124;

Score 112; DB 3; Pred. No. 5.9e-11;

100.0%; 100.0%;

Query Match Best Local Similarity

Sequence 124 AA;

AAB45529

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                      Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia, vaccine, allergic rhinitis.
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100.0%; Pred. No. 6.1e-11;
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     Modified murine interleukin-5 SEQ ID NO: 50
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99US-0132811P.
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Best Local Similarity 100.
Matches 21; Conservative
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Clostridium tetani.
                                                                                                           Clostridium tetani.
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06-MAY-1999;
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                                     Asthma;
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                                                                                                                                                                                                                                                                                                     Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia; vaccine, allergic rhinitis.
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                                                                                                                                                                                                                                                                   Modified murine interleukin-5 SEQ ID NO: 58.
   Mismatches
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                                                                                                                                                           standard; protein; 128 AA
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                                     FUNFTVSFWLRVPKVSASHLE
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99US-0132811P.
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   Conservative
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helminthic infections
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21;
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Gaps

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
    involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                            100.0%; Score 112; DB 3;
100.0%; Pred. No. 6.2e-11;
ive 0; Mismatches 0;
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100.0%; Pred. No. 6.2e-11;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                          standard; protein; 130 AA.
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                                                                                                                                                                                                                  21; Conservative
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Les 21; Conservative
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Best Local Similarity
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Clostridium tetani
                                                                                                                                        Sequence 130 AA;
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06-MAY-1999;
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Matches
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                                                                                                                                                  Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IJ-5) analogues and modified IJ-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 112; DB 3; Length 128; 100.0%; Pred. No. 6.1e-11;
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                                                                                                                                                                                                                            Example 8; Page 135; 172pp; English
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  99US-0132811P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIOTECH AS
                                      BIOTECH
                                                                                                                                                                                                                                                                                                                                                                                                      helminthic infections
                                                                                                                WPI; 2000-672791/65.
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les 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 128 AA;
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                                      (MEBI-) M & E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MEBI-) M & E
06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-APR-1999;
06-MAY-1999;
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                                                                            Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Klysner S;
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AAB45509

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Clostridium tetani.

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19-APR-2000; 2000WO-DK000205
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                                                                                                                                                         (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   helminthic infections
                                                                                                                                                                                                                   WPI; 2000-672791/65.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                  N-PSDB; AAC68869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 130 AA;
                           WO200065058-A1.
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                                                                                                               23-APR-1999;
06-MAY-1999;
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06-MAY-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-NOV-2000.
                                                       02-NOV-2000
                                                                                                                                                                                       Klysner S;
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Best Local S:
Matches 21
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AAB45528
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention is concerned with methods of treating asthma, eosinophilia, allergic trhintis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                    Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 3; Length 130; 100.0%; Pred. No. 6.2e-11; ive 0; Mismatches 0; Indels (
                                                                                                                                         Modified murine interleukin-5 SEQ ID NO: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified human interleukin-5 SEQ ID NO: 32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 9; Page 136; 172pp; English
                                                      AAB45509 standard; protein; 130 AA
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99US-0132811P
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                                                                                                              (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   helminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-672791/65.
                                                                                                                                                                                                                               Clostridium tetani.
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les 21; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 130 AA;
                                                                                                                                                                                                                                                        WO200065058-A1.
                                                                                                                                                                                                                   musculus.
                                                                                                                                                                                                                                                                                                                                              23-APR-1999;
                                                                                                                                                                                                                                                                                                                                                            06-MAY-1999;
                                                                                                            26-FEB-2001
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                                                                                                                                                                                                                                                                                      02-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                     Klysner S;
                                                                                 AAB45509;
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Best Loc Matches

RESULT 99

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AAB45516

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Down-regulating interleukin S (IL-S) activity in humans by administering IL-S and/or an IL-S analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 112; DB 3;
100.0%; Pred. No. 6.2e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modified murine interleukin-5 SEQ ID NO: 56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 142-143; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB45528 standard; protein; 130 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 FNNFTVSFWLRVPKVSASHLE 21
99DK-00000552.
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99US-0132811P.
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Gaps

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Indels

Length 130;

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Down-regulating interleukin 5 (IL-5) activity in humans by administering
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                             IL-5; interleukin-5; allergy; cytokine; helminthic infection;
eosinophilia; vaccine; allergic rhinitis.
        it is possible that they may be used in the treatment of cancer and helminthic infections
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                                                                                 ; DB 3;
6.2e-11;
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Mismatches 0;
                                                                                                                                                                                                                                                                                                                                               Modified human interleukin-5 SEQ ID NO: 10.
                                                                                                                 0; Mismatches
                                                                                 100.0%; Score 112; 100.0%; Pred. No. 6
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                                                                                                                                                                AAB45498 standard; protein; 132 AA.
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                                                                                                                 21; Conservative
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1es 21; Conservative
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Clostridium tetani.
                                                                                                 Local Similarity
                                                    Sequence 130 AA;
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06-MAY-1999;
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                                                                                   Query Match
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                                                                                                                                                                                                                                                                                                                                                                           Asthma;
                                                                                                                                                                                                                                                                                                                                                                                             cancer;
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AAB45520
                                                                                                                 Matches
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Matches
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ID AAB4
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                                            Down-regulating interleukin 5 (IL-5) activity in humans by administering
                                                                                                                                   The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin.5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition,
                                                           IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or
amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                                                                                                                                               Length 130;
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                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 3;
100.0%; Pred. No. 6.2e-11;
                                                                                                                                                                                                                                                                                                                                        0; Mismatches
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                                                                                                        Example 2; Page 163; 172pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB45521 standard; protein; 130 AA.
                                                                                                                                                                                                                                                                                                                                                                                                  86 FNNFTVSFWLRVPKVSASHLE 106
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99US-0132811P
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                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.
Matches 21, Conservative
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                                                                                                                                                                                                                                  it is possible that t)
helminthic infections
 2000-672791/65.
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WPI; 2000-672791/
N-PSDB; AAC68881.
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                                                                                                                                                                                                                                                                              Sequence 130 AA;
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06-MAY-1999;
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Indels

AAB45520;

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airway hyper-responsiveness, AHR, mucus hyper-secretion, goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; chimeric; tetanus p30; murine.
                                                                                                                                                                                                                                                                      Down-regulating interleukin 5 (IL-5) activity in humans by administering \rm IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or
                                                                                                                                                                                                                                                                                                                                                                                    The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                          IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or
amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chimeric murine IL-13 protein with tetanus toxin p30 peptide SegID 14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mouse; immunogenic; IL-13; interleukin-13; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 3;
100.0%; Pred. No. 6.3e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Tetanus P30 peptide"
                                                                                                                                                                                                                                                                                                                                                  Example 6; Page 123-124; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADL63987 standard, protein; 132 AA
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                                                                                              99DK-00000552.
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28-FEB-2003; 2003GB-00004672.
                                                          19-APR-2000; 2000WO-DK000205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-AUG-2003; 2003WO-GB003703
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                      (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          helminthic infections
                                                                                                                                                                                                                                  WPI; 2000-672791/65.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 132 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2004019974-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Simil
                                                                                              23-APR-1999;
06-MAY-1999;
                      02-NOV-2000.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                    Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia, vaccine, allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Asthma, IL-5, interleukin-5, allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 112; DB 3;
100.0%; Pred. No. 6.3e-11;
ive 0; Mismatches 0;
                                                                                                            Modified human interleukin-5 SEQ ID NO: 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified human interleukin-5 SEQ ID NO: 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 6; Page 149; 172pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB45495 standard; protein; 132 AA.
AAB45520 standard; protein; 132 AA
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                                                                                                                                                                                                                                                                                                                                                                                    99DK-00000552.
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                                                                          (first entry)
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Best Local Similarity 100.
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            (MEBI-) M & B BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    helminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-672791/65.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                Clostridium tetani
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                                                                                                                                                                                                                                                                  WO200065058-A1
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                                                                                                                                                  Asthma; IL-5;
                                                                                                                                                                                                              Homo sapiens.
                                                                          26-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                    23-APR-1999;
06-MAY-1999;
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RESULT 104 AAB45495

Klysner S;

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Gaps

us-09-806-703a-14.rag

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Misc-difference 125
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     Misc-difference
                               Misc-difference
                                                            Misc-difference
                                                                                                                 Misc-difference
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                                                                                                                                                           WO2004019974-A2
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                                                                                                                                                                                   11-MAR-2004.
                                                                                                                                                                                                                                                                                                                          Ashman C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                     This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune corresponse by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in a appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 (while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, conn-human mammalian species, to enhance its immunogenicity. Accordingly, mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric murine IL-13 protein containing a tetanus p30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                         New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mouse; immunogenic; IL-13; interleukin-13; vaccine;
airway hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30; murine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chimeric murine IL-13 protein with tetanus toxin p30 peptide SeqID 15.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 8; Length 132; 100.0%; Pred. No. 6.3e-11; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "Wild type Leu substituted for Val"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
1. .21
/note= "Tetanus P30 peptide"
                                                                                                                                                                  Disclosure; SEQ ID NO 14; 89pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide (immunogen 5) of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADL63988 standard; protein; 132 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity 100.0%;
21; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
             (GLAX ) GLAXO GROUP LTD (ASHM/) ASHMAN C.
                                                     Ellis JH;
                                                                                 WPI; 2004-239121/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 132 AA;
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                                                     Ashman C,
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Chimeric.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
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Matches
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This invention relates to a novel immunogenic composition comprising an Inl-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell captiopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, attributable to non-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airay hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airawsys and skin irritation, as well as reducing the requirement for inhaled corticostercids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy corticus in the chimeric murine IL-13 protein with humanised amino acid sequence is the chimeric murine IL-13 protein with humanised amino acid invariant activities is substitutions containing a tetanus p30 peptide (immunogen 6) of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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                                                          note= "Wild type Gly substituted for Ala"
note= "Wild type Tyr substituted for Phe"
                                                                                                                                                                                                                                                                           /note= "Wild type His substituted for Arg"
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                                                                                                                                                                                                         /note= "Wild type Gln substituted
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100.0%; Pred. No. 6.3e-11;
ive 0; Mismatches 0;
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                                                                                                                                /note= "Wild type Ser
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28-FEB-2003; 2003GB-00004672.
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Matches 21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ellis JH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           明然は終れば出
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airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; chimeric; tetanus p30; murine. immunogenic; IL-13; interleukin-13; vaccine;

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Clostridium tetani.

Chimeric

Synthetic

.. .21 'note= "Tetanus P30 peptide" location/Qualifiers Peptide

Leu substituted for Val" note= "Wild type Misc-difference

note= "Wild type Ser substituted for Thr" Misc-difference

for note= "Wild type Tyr substituted Misc-difference

for Ala" note= "Wild type Gly substituted note= "Wild type Ser substituted Misc-difference Misc-difference Misc-difference

note= "Wild type Gln substituted for Asn" note= "Wild type His substituted for Arg" Misc-difference

WO2004019975-A2

11-MAR-2004.

28-AUG-2003; 2003WO-GB003729

30-AUG-2002; 2002GB-00020211. 28-FEB-2003; 2003GB-00004672.

(GLAX) GLAXO GROUP LTD.

Ellis JH, Ashman C;

WPI; 2004-239122/22.

New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.

Disclosure; SEQ ID NO 15; 89pp; English.

This invention relates to a novel immunogenic composition comprising an immune in the invention relates to a novel immunogenic composition an immune ceasing by recognishing human II-13 and one or more foreign T-cell ceptropes. Specifically, it refers to a method for producing a human chimeric II-13 immunogen formulated in an appropriate manner to generate the mean vaccine. The present invention describes human chimeric II-13 sequences as having a similar conformational shape to native human II-13 while having sufficient amino acid sequence diversity, attributable to con-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to traveat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric murine IL-13 protein with humanised amino acid increase. invention

This invention relates to a novel immunogenic composition comprising an response by recognising human IL-13 and one or more foreign T-cell response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human vaccine. The present invention describes human chimeric or a human vaccine. The present invention describes human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence its immunogenicity. Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), the method results in a reduction in airway hyper-responsiveness (AHR), the airways and skin irritation, as well as reducing the requirement for inhaled corticostercides (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric murine IL-13 protein containing a tetanus p30

Sequence 132 AA;

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                                                                                                                                                                                           mouse; immunogenic; IL-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell merepapasia; aub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; chimeric; tetanus p30; murine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                           Chimeric murine IL-13 protein with tetanus toxin p30 peptide SeqID 14.
                     Gaps
                    ;
0
 Length 132;
                    Indels
                      ö
         Pred. No. 6.3e-11;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                              1. .21
/note= "Tetanus P30 peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; SEQ ID NO 14; 89pp; English.
                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                               ADL63911 standard; protein; 132 AA.
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                                        1 FNNFTVSFWLRVPKVSASHLE
100.0%;
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28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                         (first entry)
                    21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ashman C;
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                                                                                                                                                                                                                                                                          Clostridium tetani.
         Similarity
                                                                                                                                                                                                                                                                                                                                                            WO2004019975-A2
                                                                                                                                                        03-JUN-2004
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                                                                                                                                                                                                                                                                                             Chimeric.
Query Match
         Best Local
                                                                                                                                                                                                                                                                                                                           Peptide
                                                                                                                                                                                                                                                                                   Mus sp.
                                                                                           108
                   Matches
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Gaps

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Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; human; mouse; murine; T-helper epitope; tetanus toxin; P30; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                   Chimeric IL-13/tetanus toxin P30 epitope immunogen 6, SEQ ID NO:15.
     Length 132;
                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           "Tetanus toxin P30 epitope"
  Score 112; DB 8;
Pred. No. 6.3e-11;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English,
                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                       standard; protein; 132 AA.
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0
                                                          1 FNNFTVSFWLRVPKVSASHLE
                                                                            FINITIONS FWLR VPKVSASHLE
  th 100.0%;
| Similarity 100.0%;
| 21; Conservative 0;
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28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                          (first entry)
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/note= '
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                                                                                                                                                                                                                                                                                                                                                              Mus sp.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO2004019979-A2
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                                                                                                                                                                                                          03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                 sapiens
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 Query Match
Best Local S
                                                                                                                                                    ADL97895
                                                                                                                                                                                ADL97895;
                                                                                                                                                                                                                                                                                                                                                                                        Chimeric.
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                                                                                                                           RESULT 110
                             Matches
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                                                                                                                                          ADL97895
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition comprises an immunogen that is capable of generating an immunos response against self interleukin-13 [L-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonucleotide companishing at least one unmethylated CG motif and a saponin. The IL-13 immunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a murine IL-13/tetanus toxin P30 epitope immunogen of the invention.
                                                                                                                                                                                                                                                                                                              Interleukin-13; IL-13; self immunogen, CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary diseas; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; mouse; murine; T-helper epitope; tetanus toxin; P30; mutant; mutein.
                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                     Murine IL-13/tetanus toxin P30 epitope immunogen 5, SEQ ID NO:14.
                                                                                  ö
                                                      Length 132;
                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .21
/note= "Tetanus toxin P30 epitope"
                                                                    6.3e-11;
                                                      DB 8;
                                                                               Mismatches
                                                      Score 112;
Pred. No. 6
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 the invention
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                                                                                                                                                                                                    ADL97894 standard; protein; 132 AA.
                                         100.0%; Scc.
100.0%; Pre
                                                                                                                          1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-AUG-2003; 2003WO-GB003721
                                                                                                                                                                                                                                                          (first entry)
                                                                 Best Local Similarity 100.
Matches 21; Conservative
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peptide (immunogen 5)
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                                                                                                                                                                                                                                                                                                                                                                                                Mus sp.
Clostridium tetani.
Chimeric.
                           Sequence 132 AA;
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                                                                                                                                                                                                                                 ADL97894;
                                                   Query Match
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                                                                                                                                                                            RESULT 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
                                                                                                                                                                                         ADL97894
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The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition comprises an immunogen that is capable of generating an immune response against self interleukin-13 (IL-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonuclectide containing at least one unmethylated CG motif and a saponin. The IL-13 immunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, context allergies or dermatitis. The present sequence represents a chimeric IL-13 (comprising the human IL-13 with murine IL-13 b-cell epitopes)/tetanus toxin P30 epitope immunogen of the invention.
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Pred. No. 6.3e-11;
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Best Local Similarity
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Sequence 133 AA;
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                                                                                                                                                                            This invention relates to a novel immunogenic composition comprising an regonse by recognising human L1-13 (interleukin-13) element that is capable of driving an immune response by recognising human II-13 and one or more foreign T-cell cpitopes. Specifically, it refers to a method for producing a human chimeric II-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric II-13 sequences as having a similar conformational shape to native human II-13 con-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiaethmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human II-13 protein containing an N-terminal
  ö
                                                                                                                                                                                                                          airway hyper-responsiveness; AHR; mucus hyper-secretion;
gobblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; aschma; atopic dermatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New immunogenic composition comprising an interleukin-13 (IL-13) element
  Gaps
                                                                                                                                                                                    Chimeric human IL-13 protein with tetanus toxin p30 peptide SeqID 12
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 Indels
                                                                                                                                                                                                            human; immunogenic; IL-13; interleukin-13; vaccine;
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0; Mismatches
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                                                                                                            ADL63985 standard; protein; 133 AA
                        21
                                       FINITIONS FWLRVPKVSASHLE 21
                       FINIFTVSFWLRVPKVSASHLE
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28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                             (first entry)
21; Conservative
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                                                                                                                                                                                                                                                                            chimeric; tetanus p30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ellis JH;
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                                                                                                                                                                                                                                                                                                     Homo sapiens.
Clostridium tetani.
Chimeric.
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                                                                                                                                                             03-JUN-2004
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Matches
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                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                   Chimeric human IL-13 protein with tetanus toxin p30 peptide SeqID 18
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                       Length 133;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note= "Wild type Thr substituted for Ser'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note= "Wild type Arg substituted for Lys"
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                                                                                                                                                                                                                                                                                                                                                                                       human; immunogenic; IL-13; interleukin-13; vaccine;
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                     100.0%; Score 112; DB 8; 100.0%; Pred. No. 6.4e-11;
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                                                           Mismatches
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                                                                                               1 FNNFTVSFWLRVPKVSASHLE 21
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28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                                             (first entry)
                                                           Conservative
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Ouery Match
Best Local Similarity
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(first entry)
                          (GLAX ) GLAXO GROUP LTD. (ASHM/) ASHMAN C.
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Best Local Similarity
                                                                                                               Ellis JH;
                                                                                                                                                                       WPI; 2004-239121/22.
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Clostridium tetani.
Chimeric.
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                                                                                                            Ashman C,
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This invention relates to a novel immunogenic composition comprising an immune cresponse by recognishing human IL-13 and one or more foreign T-cell ceptropes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate to human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, attributeable to con-human mammalian species, to enhance its immunogenicity, accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithalial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals subfering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human IL-13 protein containing non-human amino containing mon-human amino contains.
New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
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Gaps
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0
100.0%; Score 112; DB 8; Length 133; 100.0%; Pred. No. 6.4e-11; ative 0; Mismatches 0; Indels (
                                          Conservative
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21 21 1 FNNFTVSFWLRVPKVSASHLE FNNFTVSFWLRVPKVSASHLE

ADL64007 standard; protein; 133 AA

Chimeric human IL-13 protein with tetanus toxin p30 peptide SegID 19.

airway hyper-responsiveness; AHR; mucus hyper-secrétion; oblet cell mecaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; human; immunogenic; IL-13; interleukin-13; vaccine; chimeric; tetanus p30; mutant; mutein.

"Tetanus P30 peptide" 22. .133 /note= "IL-13 protein" Location/Qualifiers /note=

Val" Thr" for Gln" 'note= "Wild type Thr substituted for Ser' 'note= "Wild type Arg substituted for Lys" for Asp' for 11e" for Arg' for Arg" for for for "Wild type Glu substituted note= "Wild type Met substituted "Wild type lys substituted "Wild type His substituted "Wild type Lys substituted "Wild type Glu substituted "Wild type Arg substituted substituted "Wild type Gly substituted "Wild type lys substituted note= "Wild type Leu substituted substituted Val "Wild type Glu "Wild type 28-AUG-2003; 2003WO-GB003703, 30-AUG-2002; 2002GB-00020212. 28-FEB-2003; 2003GB-00004672. (GLAX) GLAXO GROUP LTD (ASHM/) ASHMAN C. note≃ note= note= note= note= 'note= 'note= note= note= /note= Ashman C, Ellis JH; WPI; 2004-239121/22. Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference N-PSDB; ADL63992 Misc-difference WO2004019974-A2 11-MAR-2004

New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.

Disclosure; SEQ ID NO 19; 89pp; English.

This invention relates to a novel immunogenic composition comprising an II-13 (interleukin-13) element that is capable of driving an immune response by recognishing human II-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric II-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric II-13 sequences as having a similar conformational shape to native human II-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individual Suffering from or susceptible to chronic obstructive pulmonary disease (CODD), asthma or atopic dermatis. This polypeptide sequence is the chimeric human II-13 protein containing non-human amino of the invention of a substitutions and an N-terminal tetanus p30 peptide (immunogen 10) the invention

Sequence 133 AA;

us-09-806-703a-14.rag

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                               Ellis JH,
                                                                                                                                                                                                                                                                                                                                                                                                                            ADL63909;
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Matches
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                                                                                                                                                                                            therapy;
                                                                                                                                                                 human; immunogenic; IL-13; interleukin-13; vaccine;
airway hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therap
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30; mutant; mutein.
                        Gaps
                                                                                                                                                  Chimeric human IL-13 protein with tetanus toxin p30 peptide SeqID 19
                       ö
       Length 133;
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                                                                                                                                                                                                                                                                                                                       note= "Wild type Thr substituted for Ser"
                                                                                                                                                                                                                                                                                                                                        note= "Wild type Arg substituted for Lys"
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      DB 8;
               6.4e-11;
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     100.0%; Score 112; D
100.0%; Pred. No. 6.4
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                      note= "IL-13 protein"
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                                                                                                ADL63968 standard; protein; 133 AA
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                                      FINIFIVSFWLRVPKVSASHLE
                                                  FINETVSFWLRVPKVSASHLE
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                                                                                                                                 (first entry)
                      21; Conservative
                                                                                                                                                                                                                             Homo sapiens.
Clostridium tetani.
              Similarity
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                                                                                                                                                                                                                                                      Synthetic
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      Query Match
Best Local S
                                                                                                                                                                                                                                             Chimeric
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                                                                                RESULT 114
                     Matches
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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell cepitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate channer or IL-13 immunogen formulated in an appropriate manner to generate concurrent and the present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, attributable to con-human mammalian species, to enhance its immunogenicity, accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to tread individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human IL-13 protein containing non-human amino acid subbatilutions and an N-terminal tetanus p30 peptide (immunogen 10)
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                                                                                                                                                                                                                                                                                                                                                                     New vaccine composition useful for treating asthma, Chronic obstructive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                           pulmonary disease or atopic disorders, e.g. dermatitis, compris
immunogen generating an immune response against interleukin-13
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    .21
    /note= "Tetanus P30 peptide"

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; SEQ ID NO 19; 89pp; English.
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28-FEB-2003; 2003GB-00004672.
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                                                                           (GLAX ) GLAXO GROUP LID
                                                                                                                                                               Ashman C;
                                                                                                                                                                                                                                       WPI; 2004-239122/22.
N-PSDB; ADL63916.
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Clostridium tetani.
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note= "Wild type Arg substituted for Lys" 'note= "Wild type Thr substituted for Ser"

"Tetanus P30 peptide"

'note=

22. .133 /note= "IL-13 protein"

Misc-difference Misc-difference Misc-difference Misc-difference

note= "Wild type Val substituted "Wild type Glu substituted

'note=

for Ile

note= "Wild type Met substituted

"Wild type Gly substituted note= "Wild type lys substituted "Wild type His substituted

note=

Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference Misc-difference

Misc-difference

for Arg'

"Wild type lys substituted

/note= 'note= 'note= "Wild type Leu substituted

for

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This invention relates to a novel immunogenic composition comprising an immune response by recognising human II-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric II-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric II-13 sequences as having a similar conformational shape to native human II-13 sequences as having a similar conformational shape to native human II-13 while having sufficient amino acid sequence diversity, attributable to non-unuan mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, gobbet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy; to treat individuals suffering from or susceptible to chronic obstructive sequence is the chimeric human II-13 protein containing an N-terminal expenses.
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100.0%; Score 112; DB 8; Length 133;
Best Local Similarity 100.0%; Pred. No. 6.4e-11;
Matches 21; Conservative 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; SEQ ID NO 12; 89pp; English.
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28-FEB-2003; 2003GB-00004672.
                                                                                     28-AUG-2003; 2003WO-GB003729
                                                                                                                                                                                                                                                                                                     (GLAX ) GLAXO GROUP LTD
                                                                                                                                                                                                                                                                                                                                                                                 Ellis JH, Ashman C;
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11-MAR-2004.
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"Wild type Glu substituted for Gln"

"Wild type Arg substituted for

WO2004019975-A2

11-MAR-2004.

30-AUG-2002; 2002GB-00020211. 28-FEB-2003; 2003GB-00004672. 28-AUG-2003; 2003WO-GB003729.

(GLAX) GLAXO GROUP LTD

Ellis JH, Ashman C;

for Arg

"Wild type Lys substituted

note= 'note=

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Disclosure; SEQ ID NO 18; 89pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                          airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chironic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; chimeric; tetanus p30; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric human IL-13 protein with tetanus toxin p30 peptide SeqID 18
                                                                                                                                                                                                                                                                                                                                                                                                                    human; immunogenic; IL-13; interleukin-13; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1. .21
                                                                                                                                                                                                                                                                                                                                                            ADL63967 standard; protein; 133 AA.
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Homo sapiens. Clostridium tetani.

Synthetic

Peptide

03-JUN-2004 ADL63967;

RESULT 116 ADL63967

8 g

This invention relates to a novel immunogenic composition comprising an response by recognising human IL-13 and one or more foreign T-cell ceptropes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate chimeric IL-13 immunogen formulated in an appropriate manner to generate confinences as having a similar conformational shape to native human IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), the method results in a reduction in airway hyper-responsiveness (AHR), con-human mammalian species, to enhance its immunogenicity, Accordingly, the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasehmatic activities, can be used via gene therapy contract individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human IL-13 proctein containing non-human amino containing intervals. Chronic obstructive New vaccine composition useful for treating asthma, Chronic obstructi pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13. WPI; 2004-239122/22. N-PSDB; ADL63915.

Sequence 133 AA;

FINNFTVSFWLRVPKVSASHLE 21

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ADL979:
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                                                                                                                                                                                                                                                                                                    Human IL-13 mutant/tetanus toxin P30 epitope immunogen 10, SEQ ID NO:19
                                                                                                                                                                                                                                                                                                                                 Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; human; T-helper epitope;
                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
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   Length 133;
                                    Indels
 ; DB 8;
6.4e-11;
100.0%; Score 112; D
100.0%; Pred. No. 6.4
:ive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                            tetanus toxin; P30; mutant; mutein.
                                                                                                                                                                                            ADL97937 standard; protein; 133 AA.
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                                                                     FUNFTVSFWLRVPKVSASHLE
                                                                                           1 FNNFTVSFWLRVPKVSASHLE
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28-FEB-2003; 2003GB-00004672
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                                                                                                                                                                                                                                                                 (first entry)
Query Match 100.
Best Local Similarity 100.
Matches 21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ellis JH, Ashman C;
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N-PSDB; ADL97899.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
Clostridium tetani.
Chimeric.
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                                                                                                                                                                                                                                                                 03-JUN-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                              ADL 97937;
                                                                                                                                                           RESULT 117
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The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition comprises an immunogen that is capable of generating an immune response against self interleukin-13 [L-13] and an adjuvant composition comprising a combination of an immunostimulatory oligonucleotide containing at least one unmethylated CG motif and a saponin. The IL-13 immunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 supplemented with foreign T-helper epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a human IL-13-derived immunogen of the invention which comprises human IL-13 immunogen 1 (ADL97933 and the
                                                                                                                                                                                                                                                                                                                                                                                     Human IL-13 mutant/tetanus toxin P30 epitope immunogen 9, SEQ ID NO:18.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; human; T-helper epitope;
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100.0%; Pred. No. 6.4e-11;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tetanus toxin; P30; mutant; mutein.
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1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                     ADL97936 standard; protein; 133
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28-FEB-2003; 2003GB-00004672.
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Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                     03-JUN-2004
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Best Local S:
Matches 21
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                                                                                                                            RESULT 118
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Gaps

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100.0%; Score 112; DB 8; Length 133; 100.0%; Pred. No. 6.4e-11; ive 0; Mismatches 0; Indels 0

Query Match 100. Best Local Similarity 100. Matches 21; Conservative

encephalopathy;

Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomypathy; transmissible spongiform encephalopathy. Creutzfeld-Jakob disease; Kuru, haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.

Amyloid beta tetanus toxoid/HA/CS fusion protein, SEQ ID NO:25.

(revised)
(first entry)

11-SEP-2003 27-MAR-2001

AAB49089;

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The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition ocomprises an immunogen that is capable of generating an immune response against self interleukin-13 (IL-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonuclectide containing at least one unmethylated CG motif and a saponin. The IL-13 minunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence repersents a human IL-13/tetanus toxin P30 epitope
                                                                                                                                                                                                                                                                                                                                               Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiaethmatic; respiratory; antiallergic; dermatological; human; T-helper epitope; tetanus toxin; P30; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                 Human IL-13/tetanus toxin P30 epitope immunogen 3, SEQ ID NO:12.
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/note= "Tetanus toxin P30 epitope"
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100.0%; Pred. No. 6.4e-11;
ive 0; Mismatches 0;
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                                                                     ADL97892 standard; protein; 133 AA.
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28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                               03-JUN-2004 (first entry)
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Best Local Similarity 100.
Matches 21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
Clostridium tetani.
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                                                                                                                                          ADL97892;
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Region
RESULT 119
                                        ADL97892
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01-JUN-2000; 2000WO-US015239.

(NEUR-) NEURALAB LTD

Schenk DB;

01-JUN-1999;

WPI; 2001-070921/08.

lasmodium falciparum.

Chimeric.

WO200072876-A2

07-DEC-2000.

Homo sapiens. Clostridium tetani. Influenza virus.

Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.

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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the component. The invention also relates to a method for determining the involves measuring a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a component. The inproved status with respect to the disorder. The four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The prognosis of improved status with respect to the disorder. The compositions of the invention are useful for treating a vide variety of disorders include Alaheimer's disease characterised by amyloid beta apptide fibril deposits; type 2 diabetes characterised by amyloid beta apptide fibril deposits; type 2 diabetes characterised by amyloid obsta poptide fibril deposits; tuberculosis) characterised by amyloid carthritis, osteomyelitis, tuberculosis) characterised by Attibulated from serum amyloid A protein (ApoSSA); systemic semile amyloid carthritis (error from serum amyloid A protein (ApoSSA); systemic semile composites and familial amyloid cardiomyopathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-CC composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-CC composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-CC composition to treat or prevent Alzheimer's disease.
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Sequence 136 AA;

AAB49089 standard; protein; 136 AA.

RESULT 120

AAB49089 ID AAB4 XX

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Gaps

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Indels

21

1 FNNFTVSFWLRVPKVSASHLE

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FINETVSFWLRVPKVSASHLE 21

Query Match

DB 4; Length 136; 100.0%; Score 112;

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated thus reduce and undleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
                                     Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carrier protein; CD4+; T cell epitope; N6; N10; N19; immunogen; encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polyepitope carrier protein construct amino acid sequence.
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100.0%; Pred. No. 6.8e-11;
ive 0; Mismatches 0;
            Modified human interleukin-5 SEQ ID NO: 11
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Best Local Similarity 100.
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                                                                                Homo sapiens.
Clostridium tetani.
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                                                                                                                       WO200065058-A1
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06-MAY-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
                                                                                                                                                                                                                                                            Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                            Gaps
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                           Indels
        Pred. No. 6.5e-11;
                                                                                                                                                                                                                                 Modified murine interleukin-5 SEQ ID NO: 22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 10; Page 137; 172pp; English
                                                                                                                                                AAB45510 standard; protein; 139 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB45499 standard; protein; 141 AA
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100.08; Lt.
                                                                  1 FUNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                               99DK-00000552.
99US-0132811P.
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                                                                                                                                                                                                       (first entry)
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                        21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 100.
Les 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MEBI-) M & B BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-672791/65.
                                                                                                                                                                                                                                                                                                                     Clostridium tetani.
           Best Local Similarity
Matches 21; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 139 AA;
                                                                                                                                                                                                                                                                                                                                               WO200065058-A1
                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-1999;
                                                                                                                                                                                                       26-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                           06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                         02-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Klysner S;
                                                                                                                                                                             AAB45510;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 122
AAB45499
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Matches
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Gaps

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57

Length 141; Indels

Gaps

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19-APR-2000; 2000WO-DK000205
                                                                                                                    Best Local Similarity 100. Matches 21; Conservative
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                                                                                                                                                                                                                                                                              WPI; 2000-672791/65.
            WPI; 2000-023325/02.
                                                                                                                                                                                                                Clostridium tetani.
                 N-PSDB; AAZ31414
                                                                                                         Sequence 143 AA;
                                                                                                                                                                                                                                                                                   N-PSDB; AAC68883
                                                                                                                                                                                                                         WO200065058-A1.
                                                                                                                                                                                                             musculus
                                                                                                                                                                                                                                                  23-APR-1999;
06-MAY-1999;
    Rappuoli R,
                                                                                                                                                                               26-FEB-2001
                                                                                                                                                                                                                                 02-NOV-2000
                                                                                                                                                                                                                                                                       Klyener S;
                                                                                                                                                                       AAB45530;
                                                                                                                 Match
                                                                                                                                                      RESULT 124
                                                                                                                                                                                                             Mus
                                                                                                                 Query
δ
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                                                                                                  100.0%; Score 112; DB 3; Length 145; 100.0%; Pred. No. 7e-11;
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                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified human interleukin-5 SEQ ID NO: 44.
                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 12; Page 153; 172pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                               101 FNNFTVSFWLRVPKVSASHLE 121
                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB45522 standard; protein; 147
                                                                                                                                                                                                                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-APR-2000; 2000WO-DK000205.
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                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MEBI-) M & E BIOTECH AS
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                                                                                                                                                                         helminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            it is possible that the the confinithic infections
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Best Local Similarity
                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
Clostridium tetani.
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                                                                                                                                                                                                                        Sequence 145 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 147 AA;
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06-MAY-1999;
                                                                                                                                                                                                                                                                                                           21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB45522;
                                                                                                                                                                                                                                                                                                              Matches
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셤
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                          The invention provides carrier proteins comprising at least 5 CD4+ T cell epitope. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) constructing oligonucleotide molecules that encode peptide epitopes; (b) annealing the oligonucleotides for form duplexes; (c) introducing the duplexes into an expression vector; (d) introducing the duplexes into an expression vector; (d) introducing the expression vector into a host cell; and (e) isolating the fusion protein produced from a protective immunogen in the control of diseases caused by encapsulated bacteria. The present sequence represents the amino acid sequence of N6 polyepitope carrier protein construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                      Carrier proteins containing CD4+ epitopes useful for protecting against diseases caused by encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified murine interleukin-5 SEQ ID NO: 60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 12; Page 166-167; 172pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB45530 standard; protein; 145 AA.
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                                                                                                                                                                                       Disclosure, Fig 2, 76pp, English.
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Gaps

(first entry)

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Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                                                                         Human tumour necrosis factor-alpha; TNP-alpha; TNP-alpha analogue; vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis; cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
                                    AAW81335 standard; protein; 158 AA.
                                                                                                                                                     TNF30-4, a TNF-alpha analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (FERR ) FARM LAB FERRING AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jensen MR, Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-594561/50.
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                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                   WO9846642-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LS-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                             15-APR-1998;
                                                                                                                 21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                     22-OCT-1998
                                                                                                                                                                                                                                                                                          Synthetic
                                                                          AAW81335;
                                                                                                                                                                                                                                                        asthma.
RESULT 127
                    AAW81335
                                        The present sequence represents a modified human tumour necrosis factoralpha analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of alpha analogues are used as vaccines for treatment or prevention of rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any capture. Sort, disseminated sclerosis, diabetes, psoriasis, osteoporosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified human tumour necrosis factor-alpha - comprises immunodominant cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                                                                                                                                                                                    Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue; vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis; cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 112; DB 2; Length 158; 100.0%; Pred. No. 7.8e-11; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jensen MR, Mouritsen S, Elsner H, Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 16; Page 76-77; 134pp; English.
                                                                                                                                                   AAW81333 standard; protein; 158 AA.
                                              FINETVSFWLRVPKVSASHLE 123
                  21
                  FINIFIVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                    TNF30-2, a TNF-alpha analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-DK000157.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97DK-00000418.
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                                                                                                                                                                                                                              (first entry)
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N-PSDB; AAV68422.
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                                                                                                                                                                                                                                21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                    103
                                                                                                                                                                                         AAW81333;
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                                                                                                                                                                                                                                                                                                                                                                   asthma.
                                                                                                          RESULT 126
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Dalum I;

Elsner H,

97DK-00000418. 97US-0044187P

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The present sequence represents a modified human tumour necrosis factoralpha analogue. The analogues have no residual TWF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TWF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TWF alpha, has at least one fragment of TWF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TWF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B'. I or D strands in the back beta-sheet. The TWF-alpha analogues are used as vaccines for treatment or prevention of alpha analogues are used as vaccines for treatment or prevention of rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any contains and substitutions, cancer of any contains.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 2; Length 158; 100.0%; Pred. No. 7.8e-11; tive 0; Mismatches 0; Indels (
Example 1; Page 80; 134pp; English.
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Matches 21; Conserv
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ID AAW8
XX
AC AAW8
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Gaps

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FUNFTVSFWLRVPKVSASHLE 21

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Local Similarity

Best Loc Matches

FINETVSFWLRVPKVSASHLE

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cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-594561/50.
N-PSDB; AAV68421.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 158 AA;
                                                                            Synthetic.
Homo sapiens.
                                                                                                                                         WO9846642-A1
                                                                                                                                                                                                                              LS-APR-1998;
                                                                                                                                                                                                                                                                       15-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
Homo sapiens.
                                                                                                                                                                                    22-OCT-1998.
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                                    asthma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       asthma.
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence represents a modified human tumour necrosis factoralpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the Strands in the front beta-sheet, any of the connecting loops or any of the B.' I or D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of TNF-alpha, e.g. themmatoid arthritis, Crohn's disease, ulceritye colitis, cancer of any cort
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Modified human tumour necrosis factor-alpha - comprises immunodominant cell epitope, useful in vaccines to treat or prevent TNF-associated
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                                                                                   Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue;
vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis;
cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
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100.0%; Pred. No. 7.8e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 15; Page 81-82; 134pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouritsen S, Elsner H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW81332 standard; protein; 158 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             133 FNNFTVSFWLRVPKVSASHLE 153
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                                          INF30-5, a TNF-alpha analogue
                                                                                                                                                                                                                                                                                                                                                 98WO-DK000157.
                                                                                                                                                                                                                                                                                                                                                                                          97DK-00000418.
97US-0044187P.
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21-APR-1999 (first entry)
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Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diseases, e.g. cancer.
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                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                            WO9846642-A1
                                                                                                                                                                                                                                                                                                                                               15-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                  24-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                          15-APR-1997;
                                                                                                                                                                                                                                                                                                    22-0CT-1998
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                                                                                                                                                                                               Synthetic
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                                                                                                                                                      asthma.
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  NAMES OF COLORS OF STREET AND STR
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The present sequence represents a modified human tumour necrosis factoralpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beca-sheet, any of the connecting loops or any of the B'. I or D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of alpha analogues are used as vaccines for treatment or prevention of chiseases associated with excessive release or activity of TNF-alpha, e.g. theumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any contains and contains and contains and contains and contains and contains and contains and contains and contains and contains and contains and contains and contains and contains contains and contains contains and contains contains and contains contains contains and contains contains contains and contains conta
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100.0%; Pred. No. 7.8e-11;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                               Dalum I;
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                                                                                                                                                                                                                                                                                                                                                                                                   Elsner H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW81334 standard; protein; 158 AA
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                                                                                                        97DX-00000418.
97US-0044187P.
98WO-DK000157,
                                                                                                                                                                                                                                                                              (FERR ) FARM LAB FERRING AS.
                                                                                                                                                                                                                                                                                                                                                                                                   Jensen MR, Mouritsen S,
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The invention provides a pharmaceutical vaccine composition (I) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein (selected from modified TNF-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rhematoid arthritis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducting automatibodies to a self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (I) comprising cetylpyridinium chloride as a component is useful inflammatory disease. The present sequence represents a human analogue TNF-alpha
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                                                                                                                                                                                                 Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 5; Length 158; 100.0%; Pred. No. 7.8e-11;
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                                                                                          Bouman MHEM;
                                                                                                                                                                                                                                                                                                                Claim 21; Page 48-49; 55pp; English.
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  21-JUN-2000; 2000DK-0000966
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Matches 21; Conservative
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                                                                                                                                  WPI; 2002-114542/15.
N-PSDB; ABA94392.
                                                                                        Olesen OF, Balchen
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                                            (FERR ) FERRING BV.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 158 AA;
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                                                                                                                                                                                                                                                                      solubilizer.
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                                                                                                                                                                                                                                                                                                                                                     Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
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Best Local Similarity 100.0%; Pred. No. 7.8e-11;
Matches 21; Conservative 0; Mismatches 0; Indels (
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                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 14; Page 78; 134pp; English.
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                                                                                                                             97DK-00000418
97US-0044187P
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                                                                                                                                                                                                                                                                                                              N-PSDB; AAV68423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 158 AA;
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                                                                                                                                                    24-APR-1997;
WO9846642-A1
                                                                                   15-APR-1998;
                                                                                                                               15-APR-1997;
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                                                                                                                                                                                                                                               Jensen MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -
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RESULT 131 ABB07282

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Gaps

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0; Indels

Claim 21; Page 41; 55pp; English.

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WO200197837-A1.
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prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein selected from modified TNF-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid disease, cancer, cacheria, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as TNP (tumour necrosis factor)-alpha in a human for immunisation of a human subject or for treatment of a human analogue TNF30-5
                                       Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as
                                                                                                                                                                                           invention provides a pharmaceutical vaccine composition (I)
                                                                                                                                               Claim 21; Page 42-43; 55pp; English.
    N-PSDB; ABA94389.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 158 AA;
                                                                                                         solubilizer
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for the

100.0%; Score 112; DB 5; Length 1 100.0%; Pred. No. 7.8e-11; .ive 0; Mismatches 0; Indels 1 FINFTVSFWLRVPKVSASHLE 21 Local Similarity 100. Query Match Matches

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Gaps

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Length 158;

ABB07278 standard; protein; 158 26-MAR-2002 (first entry) 133 ABB07278; RESULT 133

TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human; Human TNF-alpha analogue TNF30-2. TNF30-2.

Homo sapiens

27-DEC-2001.

20-JUN-2001; 2001WO-DK000431

21-JUN-2000; 2000DK-0000966

(FERR) FERRING BV

Bouman MHEM; Balchen T, Olesen OF,

WPI; 2002-114542/15. N-PSDB; ABA94388.

Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as solubilizer

The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one medifiled immunogenic self-protein (selected from modifiled TNR-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self

Claim 21; Page 33-34; 55pp; English.

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                          The invention provides a pharmaceutical vaccine composition (I) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein composition comprises at least one modified immunogenic self-protein acting as a solubilizer. (I) is useful for preventing or treating a self-proteins, an inflammatory bowel disease (ulcerative colitis or crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, self-protein such as TMF (tumour necrosis factor) -alpha in a human subject. (I) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human for immunisation of a human sequence represents a human TMF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antiinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antidiathmatic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as solubilizer.
                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 5; I
100.0%; Pred. No. 7.8e-11;
Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human TNF-alpha analogue TNF30-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABB07274 standard; protein; 158
                                                                                                                                                                                                                                                                                                                                                                               41 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-JUN-2001; 2001WO-DK000431.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUN-2000; 2000DK-00000966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                              Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Olesen OF, Balchen T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-114542/15.
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                                                                                                                                                                                                                                   analogue TNF30-2
                                                                                                                                                                                                                                                                   Sequence 158 AA;
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                                                                                                                                                                                                                                                                                                 Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 134
                                                                                                                                                                                                                                                                                                                                Matches
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-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachearia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (I) comprising octylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human inflammatory, disease. The present sequence represents a human TNF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one medified immunogenic self-protein (selected from modified TNP-alpha proteins) and a surfactant capable of acting as a solubilizer. (1) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, theumatoid arthitis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (1) is useful for inducing autoantibodies to a self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (1) comprising cetylphyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TNP-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; ectylpyridinium chloride; immunisation; antiinflammatory; antirheumatic; antiatrhritic; antiincer; cytostatic; antidactic; antipsoriatic; antiatrhritic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as
                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                      Length 158;
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                                                                                                                                                                                                                                    Score 112; DB 5;
Pred. No. 7.8e-11;
; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                     FINETVSFWLRVPKVSASHLE 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human TNF-alpha analogue TNF30-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABB07283 standard; protein; 158
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                                                                                                                                                                                                                                                                                                               1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                    100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-MAR-2002 (first entry
                                                                                                                                                                                                                                                                         21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-114542/15.
N-PSDB; ABA94393.
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Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (FERR ) FERRING BV
                                                                                                                                                        analogue TNF30-3
                                                                                                                                                                                              Sequence 158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200197837-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 135
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Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
inflammatory disease. The present sequence represents a human {\tt TNF}	ext{-alpha} analogue {\tt TNF30-4}
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .15
'note= "identical to residues 215-230 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "identical to residues 267-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence is that of AutoVac construct GDF-8 ext, which consists of the C-terminal 160 amino acids of human growth differentiation factor 8 (GDF-8, see AR720131) with residues 16-36 substituted by the promiscuous tetanus toxin T-cell epitope P30 (see
                                                                                               Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note= "Cys-124 may be substituted by Ser to avoid
                                                                                                                                                                                                                                                                                                                  GDF-8; myostatin; tetanus toxin;
                                                                                                                                                                                                                                                                                                                                vaccine; muscle; meat; cachexia;
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                                                                      Length 158;
                                                                                                                                                                                                                                                                                         Growth differentiation factor 8 AutoVac construct GDF-8 ext.
                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Misc-difference 141. .142
/note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "tetanus toxoid P2 epitope"
                                                                   100.0%; Score 112; DB 5;
100.0%; Pred. No. 7.8e-11;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3xample 1; Page 107-108; 110pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                              AAB20153 standard; protein; 160 AA.
                                                                                                                                    108 FNNFTVSFWLRVPKVSASHLE 128
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                                                                                                                     1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                  Growth differentiation factor 8;
T-cell epitope; down-regulation;
                                                                                                                                                                                                                                                                                                                                             cardiant; human; mutant; mutein.
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                                                                                                                                                                                                                                                                (first entry)
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                                                                                 1 Similarity 100.
21; Conservative
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/note= "(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52. .160
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note=
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                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
Clostridium tetani.
Synthetic.
                                            Sequence 158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Misc-difference
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                                                                Query Match
Best Local S
                                                                                                                                                                                                                                       AAB20153;
                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric.
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Region
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AAB20144) and residues 37-51 substituted by tetanus toxin T-cell epitope P2 (See AAB20143). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDP-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking animals. The vaccines (see AAB20145-53) are capable of breaking cutoclerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the mative sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the cortion of human GDF-8 in which a portion of the minimal disturbance of the capablation of GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at the need for antibiotic feed-additives. Anti-GDF9 vaccines can be used to treat human diseases such as cancer cachexia where muscle ears to promounced and for patients suffering from acute and chronic heart
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Osteoprotegerin ligand; OPGL; osteoprotegerin; osteoclastogenesis; tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption.
                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         An osteoprotegerin ligand/tetanus toxoid P30 epitope fusion protein.
                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                               Length 160;
                                                                                                                                                                                                                                                                                                  Score 112; DB 4; Length 16
Pred. No. 7.9e-11;
Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78. .98 /note= "tetanus toxoid P30 epitope" 99. .173 /note= "residues 242-316 of murine OPGL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15. .77
/note= "residues 158-220 of murine OPGL"
                                                                                                                                                                                                                                                                                                     Query Match
100.0%; Score 112; D
Best Local Similarity 100.0%; Pred. No. 7.9
Matches 21; Conservative 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY84426 standard; protein; 173 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "His tag"
                                                                                                                                                                                                                                                                                                                                                                                        16 FNNFTVSFWLRVPKVSASHLE
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/note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
Clostridium tetani.
Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-271444/23.
N-PSDB; AAZ99973.
                                                                                                                                                                                                                                                                          Sequence 160 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY84426;
                                                                                                                                                                                                                                             failure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein
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                                                                                             ligand (OPGL) and tetanus toxoid P30 epitope. Osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II transmembrane protein. The murine and human OPGL polypeptides are 87% homologous. OPGL is a potent osteoclast differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also an activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation in the absence of CSF-1. OPGL is also mativator of mature osteoclasts. The specification describes a method comprises using at least one OPGL polypeptide or subsequence, and/or at least one OPGL polypeptide or subsequence, and/or at method and OPGL polypeptide are useful for treating, preventing and ameliorating osteoporosis or other diseases or conditions characterised by excessive bone resorption
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Osteoprotegerin ligand; OPGL; osteoprotegerin; osteoclastogenesis; tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption.
                                                                                   sequence represents fusion protein of murine osteoprotegerin
In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used treat, prevent and ameliorate osteoporosis.
                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        An osteoprotegerin ligand/tetanus toxoid P30 epitope fusion protein.
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                                                                                                                                                                                                                                                                                                                                                                                          Length 173;
                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134. .188
/note= "residues 262-316 of murine OPGL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'note= "tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 112; DB 3; Best Local Similarity 100.0%; Pred. No. 8.6e-11; Matches 21; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY84423 standard; protein; 188 AA.
                                               Example; Page 102; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78 FNNFTVSFWLRVPKVSASHLE 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note= "His tag"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-DK000481.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98DK-00001164.
98US-0102896P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Haaning J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                      Sequence 173 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200015807-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Halkier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY84423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
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Mouritsen S;

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New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                             Bratt T, Voldborg B,
                                                                                                                                                                                                                           Claim 23; Page 159-160; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21; Conservative
                                                                                                             Klysner S, Nielsen FS,
               KLYSNER S.
NIELSEN F S.
BRATT T.
PHARMEXA AS.
                                                              (VOLD/) VOLDBORG B. (MOUR/) MOURITSEN S.
                                                                                                                                             WPI; 2003-449558/42.
                                                         VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 194 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAO30488;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
                              (NIEL/)
(BRAT/)
                (KLYS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     čey
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 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence represents fusion protein of murine osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OpGL protein is synthesised as a type II transmembrane protein. The murine and human OpGL COLypeptides are 87% homologous. OpGL is a potent osteoclast the differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OpGL is also an activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OpGL activity in an animal. The method comprises using at least one OpGL polypeptide or subsequence, and/or at method and OpGL analogue to induce an immune response in the animal. The method and OpGL polypeptide are useful for treating, preventing and ameliorating osteoporosis or other diseases or conditions characterised by excessive bone resorption
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                           In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; mutein; variant; tetanus toxoid; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                110. .130
/note= "Tetanus toxoid P30 epitope"
131. .145
146. .194
                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 112; DB 3;
100.0%; Pred. No. 9.5e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human TNFalpha variant, TNF34-P30-P2.
                                                                                                            Example; Page 94-95; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAO30489 standard; protein; 194 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  113 FNNFTVSFWLRVPKVSASHLE 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 FINFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-NOV-2001; 2001DK-00001702,
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-SEP-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .109
             WPI; 2000-271444/23.
N-PSDB; AAZ99970.
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 188 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAO30489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 139
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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with an inserted tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Multimeric protein; interleukin 5; ILS; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; mutein; variant; tetanus toxoid; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                        Length 194;
                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /105. .145
/note= "Tetanus toxoid P30 epitope"
146. .194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 112; DB 6;
100.0%; Pred. No. 9.8e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human TNFalpha variant, TNF34-P2-P30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAO30488 standard; protein; 194 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110 FNNFTVSFWLRVPKVSASHLE 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2. .109
/note= "Human TNF"
110. .124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 FUNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
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New protein comprising at least one epitope of membrane immunoglobulin E (IGE) and being free of epitopes of serum IGE, useful for treating an IGE-mediated allergic disease or condition, e.g. asthma, allergic rhinitis
                                                                                                                                                                                                                                                                                                    The present sequence is that of a fusion construct comprising human membrane IgE (mIgE) fused at its N-terminal end to a human IgE leader sequence to enhance protein expression, and fused at its C-terminal end via a proteolytic cleavage site to tetanus toxoid (TT) Th epitope to enhance immune response, and a 6His tag sequence. A plasmid comprising DNA encoding this fusion protein was used as a DNA vaccine to immunise HIA-A2 mice. Epitope-specific responses were observed. The DNA is an example of nucleic acid molecules of the invention that encode a mIgE epitope that is free of serum IgE epitopes and which optionally includes for treating an individual susceptible to, or having, an IgE mediated allergic disease, e.g. asthma, allergic rhinitis, atopic dermatitis, anaphylaxis or urticaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mucin repeat, MUC-1 analogue, vaccination, self-protein, cancer, cytotoxic T-lymphocyte immunity, breast cancer, prostate cancer, cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 8; I
100.0%; Pred. No. 1.1e-10;
                                                                                                                                            Otero M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUC-1 analogue containing foreign epitopes.
                                                                                                                                                                                                                                                                             Example 1; SEQ ID NO 6; 37pp; English.
                                                                                                                                           Weiner DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY92665 standard; peptide; 216 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183 FINFTVSFWLRVPKVSASHLE 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 FNNFTVSFWLRVPKVSASHLE
                                                         20-JUN-2003; 2003WO-US019383.
                                                                                   20-JUN-2002; 2002US-0390304P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 136. .156
/label= P30
/note= "q"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= P2
                                                                                                              (UYPE-) UNIV PENNSYLVANIA,
                                                                                                                                           Calarota S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 100.
                                                                                                                                                                     WPI; 2004-071666/07.
                                                                                                                                                                                  N-PSDB; ADH50815
    WO2004000217-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 209 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200020027-A2
                               31-DEC-2003.
                                                                                                                                           Levinson AI,
                                                                                                                                                                                                                                                    or urticaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-APR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY92665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
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ID AAY9
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                                                                                                                                                                                                              The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNPalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNPalpha variant protein with an inserted teranus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                               New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IgE; antibody; antiallergic; vaccine; antiasthmatic; antiinflammatory; dermatological; immunosuppressive; tetanus toxoid; human.
                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label = p30TT
/note= "Tetanus toxin subunit p30 (aa947-967)"
                                                                                                Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                        Length 194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note= "Tetanus toxin precursor (aa73-99)"
                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Membrane IgE-tetanus toxoid construct, allergy vaccine.
                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 6;
100.0%; Pred. No. 9.8e-11;
tive 0; Mismatches 0;
                                                                                              Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .75. .182
/note= "Protease cleavage site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note= "Protease cleavage site'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l. .18
/label= Signal_peptide
/note= "Human IgE leader"
                                                                                                                                                                                         Claim 23; Page 158; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADH50816 standard; protein; 209 AA.
                                                                                              Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  125 FNNFTVSFWLRVPKVSASHLE 145
                                                                                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  204. .209
/note= "6His tag"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 = mIgE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     148. .174
/label = TTp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.º
Matches 21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19. .139
/label = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140. .147
                                                                                             S, Nielsen FS,
            KLYSNER S.
NIELSEN F S.
PHARMEXA AS.
                                                                MOURITSEN S
                                                                                                                     WPI; 2003-449558/42.
                                      BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
Clostridium tetani.
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                           Sequence 194 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cleavage-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cleavage-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADH50816;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chimeric
           (KLYS/)
(NIEL/)
(BRAT/)
(VOLD/)
(MOUR/)
                                                                                             Klysner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 141
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Gaps

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05-OCT-1999;

20-OCT-1998;

Steinaa L,

05-OCT-1998;

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epitope. The carrier protein comprises at least 1 of NG, N10 or N19. The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) constructing oligonuclectides from duplexes; (c) introducing the annealing the oligonuclectides to form duplexes; (c) introducing the duplexes into an expression vector; (d) introducing the action an expression vector; (d) introducing the expression vector; (d) introducing the expression vector; (d) introducing the expression vector into a host cell; and (e) isolating the fusion protein produced from a culture of the host cells. The carrier protein can be used as a protective immunogen in the control of diseases caused by encapsulated bacteria. The present sequence represents the amino acid sequence of N10
                                                                                                                                                                                                                                                                                                                                                                         The invention provides carrier proteins comprising at least 5 CD4+ T cell
                                                                                                                                                                                                                                                        Carrier proteins containing CD4+ epitopes useful for protecting against diseases caused by encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carrier proteins containing CD4+ epitopes useful for protecting against diseases caused by encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carrier protein; CD4+; T cell epitope; N6; N10; N19; immunogen; N11; encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N11 polyepitope carrier protein construct amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 112; DB 3; Length 2
100.0%; Pred. No. 1.1e-10;
iive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polyepitope carrier protein construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY49254 standard; protein; 240 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                             Disclosure; Fig 2; 76pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-IB000844.
99WO-IB000844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98GB-00008932.
                                            98GB-00008932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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Best Local Similarity 100.0
Marches 21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                       Grandi G;
                                                                                                                                                                                     WPI; 2000-023325/02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-023325/02.
N-PSDB; AAZ31416.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Grandi
                                                                                          (CHIR-) CHIRON SPA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CHIR-) CHIRON SPA.
                                                                                                                                                                                                              N-PSDB; AAZ31415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 218 AA;
27-APR-1999;
                                            27-APR-1998;
                                                                                                                                    Rappuoli R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-FEB-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
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                                                                                                                                                                                                                                                                                                                                                                                                           This is an immunogenized MUC-1 analogue containing foreign epitopes P2 and P30. Immunogenic analogues of MUC-1 and, e.g. human prostate specific membrane antigen (hRSM) can be used in the claimed method as an authoryaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms (see features table). 10 regions suitable for the insertion of foreign T helper epitopes were identified. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. hPSM, heregulin 2 (Her2) and/or fibroblast growth factor 8b (RGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and (2) at least 1 B-cell group derived from the colling and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively. Note: This sequence does not appear in (AAY92664), P2 and P30 (AAY926525-26), which appear on pages 220, 213 and 214 respectively, of the specification
                                                                                                                                                                                                                                                                                               Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                   Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N10 polyepitope carrier protein construct amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 216;
                                                                                                                                                                                   Haaning J, Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 112; DB 3; 100.0%; Pred. No. 1.1e-10;
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                                                                                                                                                                                   Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       136 FNNFTVSFWLRVPKVSASHLE 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                         3xample 4; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY49253 standard; protein; 218
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0
                                                                                                                                                                                                         Birk P, Karlsson G;
                 99WO-DK000525
                                                             98DX-00001261,
98US-0105011P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-FEB-2000 (first entry)
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Matches 21; Conservative
                                                                                                                                  (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                   Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  encapsulated bacteria.
                                                                                                                                                                                                                                                   WPI; 2000-349917/30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 216 AA;
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409955730-A2

Synthetic

AAY49253;

Query Match

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34-NOV-1999

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Gaps

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Disclosure, Fig 7, 76pp, English
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                                                                                                                                                                           Misc-difference
                                                                                                                                                                                     WO200105820-A2
                                                                                                                            Homo sapiens
                                                                                                                                                                                                      20-JUL-1999;
26-JUL-1999;
                                                                                                                                                                                          25-JAN-2001
                                                        Query Match
Best Local Si
Matches 21;
                                                                                               AAB20152;
                                                                                                                                     Chimeric
                                                                                                                                           Key
Region
                                                                                                                                                          Region
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                                                                                                                                                                      Region
                                                                                   RESULT 145
                                                                                      AAB20152
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epitope. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) annealing the oligonucleotide molecules that encode peptide epitopes; (b) annealing the oligonucleotides to form duplexes; (c) introducing the oligonucleotides to form duplexes; (c) introducing the into a host cell; and (e) isolating the fusion protein produced from a protective immunogen in the control of diseases caused by encapsulated bacteria. The present sequence represents the amino acid sequence of N11 polyepitope carrier protein construct ö invention provides carrier proteins comprising at least 5 CD4+ T cell Gaps ; 0 100.0%; Score 112; DB 3; Length 240; 100.0%; Pred. No. 1.3e-10; ive 0; Mismatches 0; Indels 0 123 1 FNNFTVSFWLRVPKVSASHLE 21 103 FINNFTVSFWLRVPKVSASHLE Local Similarity 100. 1es 21; Conservative Sequence 240 AA;

Growth differentiation factor 8 AutoVac construct GDF-8 dimer. AAB20152 standard; protein; 254 AA. 30-APR-2001 (first entry)

Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein. Location/Qualifiers .109 Clostridium tetani. Synthetic.

'note= "109 C-terminal residues of human GDF-8" "109 C-terminal residues of human GDF-8" 90. .91 /note= "optionally replaced by Glu-Gly" /note= "tetanus toxoid P2 epitope" 125..145 /note= "tetanus toxoid P30 epitope" 146..254 /note= "109 C-terminal residues of P35..236 .124

'note= "optionally replaced by Glu-Gly"

20-JUL-2000; 2000WO-DK000413

99DK-00001014 99US-0145275P

(MEBI-) M & E BIOTECH AS.

Mouritsen S, Klysner S; Halkier T,

WPI; 2001-112680/12.

Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.

Example 1; Page 105-106; 110pp; English.

The present sequence is that of AutoVac construct GDP-8 dimer comprising 2 copies of the 109-amino acid C-terminal region of human growth differentiation factors 8 (GBF-8, see AAF2014) covalently connected through the P2 and P30 T-cell epitopes (see AAB20143-44) of tetanus corrected through the P2 and P30 T-cell epitopes (see AAB20143-44) of tetanus corrected the p2 and p30 T-cell epitopes (see AAB20145-53) are capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against corrected to increase the muscle growth rate of farm animals. The vaccines corrected at a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the authentic 3-dimensional correction of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 corrected for genetic immunisation of the animals. Down-regulation of GDF-8 corrected for genetic immunisation of the animals. Down-regulation of GDF-8 corrected for animals. Animic GDF-8 vaccines can be used for mast failure such than a cancer cachexia where muscle are bused to treat human diseases corrected as cancer cachexia where muscle are paint failure.

Sequence 254 AA;

Gaps ; 0 Length 254; Indels 100.0%; Score 112; DB 4; 100.0%; Pred. No. 1.3e-10; ive 0; Mismatches 0; Query Match Best Local Similarity 100. Matches 21, Conservative

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AAO30457 standard; protein; 285 AA. (first entry) 22-SEP-2003 AAO30457; RESULT 146 AA030457

hIL5-P30-P2-hIL5 (hIL5.34) fusion construct protein.

Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric.

Homo sapiens Unidentified Chimeric.

l. .19 'note= "Human IL5 leader peptide" 20. .285 /note= "Mature hIL5.34 protein" Location/Qualifiers Key Peptide Protein

WO2003042244-A2.

22-MAY-2003.

15-NOV-2002; 2002WO-DK000764. 16-NOV-2001; 2001DK-00001702. 16-NOV-2001; 2001US-0331575P.

(PHAR-) PHARMEXA AS

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNPalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct which comprises 2 human interleukin 5 (IL5) monomers joined by tetanus toxoid epitopes p30 and P2. This sequence is used to illustrate the method of the
                                                                                                                                                                New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric; variant; mutant; mutein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 285;
                                                                            Mouritsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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273. .287
/note= "Tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 6;
100.0%; Pred. No. 1.5e-10;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "Human IL5 leader peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20. .287
/note= "Mature hIL5.36 protein"
                                                                        Bratt T, Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                      Claim 20; Page 112-113; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAO30459 standard; protein; 287 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
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Best Local Similarity 100.
Matches 21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hIL5.36 variant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24. .44
                                                                          Klysner S, Nielsen FS,
                    (VOLD/) VOLDBORG B. (MOUR/) MOURITSEN S.
                                                                                                           WPI; 2003-449558/42.
N-PSDB; AAL61294.
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 285 AA;
     BRATT I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003042244-A2
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Unidentified.
Chimeric.
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                                                                                                                                                                                                                                                                                                                                                                                                     invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAO30459;
     (BRAT/)
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Peptide
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                                                                                                                                                                                                                                                                                 The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNPalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct which comprises 2 human interleukin 5 (ILS) monomers joined by tetamus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the
                                                                                                                                                                                               New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric.
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0
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                                                                                                           Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hILS-P2-P30-hIL5 (hIL5.35) fusion construct protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l. .19
'note= "Human IL5 leader peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20. .285
/note= "Mature hIL5.35 protein"
                                                                                                        Voldborg B,
                                                                                                                                                                                                                                                   Claim 20; Page 109-110; 196pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAO30458 standard; protein; 285 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  135 FINFTVSFWLRVPKVSASHLE 155
                                                                                                          Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-NOV-2002; 2002WO-DK000764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-NOV-2001; 2001DK-00001702.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21; Conservative
                                                                                                        S, Nielsen FS,
KLYSNER S.
NIELSEN F S.
BRATT T.
                                                                                                                                           WPI; 2003-449558/42.
N-PSDB; AAL61293.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PHAR-) PHARMEXA AS.
(KLYS/) KLYSNER S.
(NIEL/) NIELSEN F S.
                                                                        MOURITSEN S
                                                    VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 285 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO2003042244-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                    invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA030458;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chimeric
                                                    (VOLD/)
(MOUR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
Peptide
                                                                                                          Klysner
 KLYS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein
                (NIET/)
                                     (BRAT/)
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Best Loca Matches

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AA030458

PARKEY PA

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TWF, TWRalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct variant which comprises 2 human interleukin 5 (IL5) monomers joined by diglycine linker and including terminally positioned tetanus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           airway hyper-responsiveness, AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; murine; peptide p30.
                                                                                                                                                                                                                                                 New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 287;
                                                                                                                                                              Mouritsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein encoded by the expression plasmid pCDNmIbl3p30FC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mouse; immunogenic; IL-13; interleukin-13; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 112; DB 6; 100.0%; Pred. No. 1.5e-10; ive 0; Mismatches 0;
                                                                                                                                                          Bratt T, Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235. .239 /note= "Encoded for by AACCGT"
                                                                                                                                                                                                                                                                                                         Claim 20; Page 117-120; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADL64008 standard; protein; 385 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              267 FINIFIUSFWLRVPKVSASHLE 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-AUG-2003; 2003WO-GB003703.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-AUG-2002; 2002GB-00020212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-JUN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.
Matches 21, Conservative
                                                                                                                                                          Klysner S, Nielsen FS,
                                            KLYSNER S.
NIELSEN F S.
                            PHARMEXA AS.
                                                                                                                                                                                             WPI; 2003-449558/42.
N-PSDB; AAL61296.
                                                                                                                     (MOUR/) MOURITSEN S.
                                                                                 BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus sp.
Clostridium tetani.
Cytomegalovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 287 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004019974-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADL64008;
                                            (KLYS/)
                                                               (NIEL/)
                                                                                 (BRAT/)
                                                                                                    (VOLD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 150
         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                         The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNPsIDha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct variant which comprises 2 human interleukin 5 (IL5) monomers joined by diglycine linker and including terminally positioned tetanus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                      New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Multimeric protein; interleukin 5; ILS; TNFalpha; inflammatory disease;
tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5;
ILS; epitope; human; tetanus toxoid; chimeric; variant; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 112; DB 6; Length 287; 100.0%; Pred. No. 1.5e-10; ive 0; Mismatches 0; Indels 0
                                                                                                                 Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Human IL5 leader peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20. .287
/note= "Mature hIL5.37 protein"
                                                                                                                 Voldborg B,
                                                                                                                                                                                                                                                          Claim 20; Page 115-117; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAO30460 standard; protein; 287 AA.
                                                                                                               Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FINETVSFWLRVPKVSASHLE 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 FUNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.
Matches 21; Conservative
                                                                                                              Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hIL5.37 variant protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .19
/note=
KLYSNER S.
NIELSEN F S.
BRATT T.
                                                                                                                                                  WPI; 2003-449558/42.
                                                                           MOURITSEN S
                                                VOLDBORG B.
                                                                                                                                                                    N-PSDB; AAL61295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 287 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
Unidentified.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-MAY-2003
                                  (BRAT/) I
(VOLD/) (MOUR/) P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAO30460;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
Peptide
                   NIEL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein
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à g Region Region

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Gaps

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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune cresponse by recognishing human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in a appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunosens (AIR), con-human mammalian species, to enhance its immunogenicity. Accordingly, contrast individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide contine it... and the chimeric manning in and probabilial species and antiand protein sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chimeric manning it... and the sequence of the chim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    murine IL-13 protein and the tetani p30 peptide under the control of a CMV promoter of the invention. NOTE: This sequence is given in the figure but is not further referred to in the specification.
                                                                                                                                                                                                                                                                         New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mouse; immunogenic; IL-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 8; Length 385; 100.0%; Pred. No. 2.1e-10; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein encoded by the expression plasmid pCDNmIL13p30FC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADL63969 standard; protein; 385 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97 FNNFTVSFWLRVPKVSASHLE 117
                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig 18; 89pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 FNNFTVSFWLRVPKVSASHLE 21
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-JUN-2004 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 100.
Matches 21; Conservative
                                                   (GLAX ) GLAXO GROUP LTD.
(ASHM/) ASHMAN C.
                                                                                                                                    Ashman C, Ellis JH,
                                                                                                                                                                                        2004-239121/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              murine; peptide p30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani.
                                                                             ASHMAN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cytomegalovirus.
Synthetic.
Unidentified.
                                                                                                                                                                                                                     N-PSDB; ADL63996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 385 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus
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8
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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune compose by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 while having sufficient animal sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its on be-peithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide murine IL-13 protein and the tetani 330 septide under the control of a control of the invention. NOTE: This sequence is given in the figure to but is not further referred to in the specification.
                                                                                                                                                                                                                                                                                                                                                                                 New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N19 polyepitope carrier protein construct amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 8; Length 385; 100.0%; Pred. No. 2.1e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
/note= "Encoded for by AACCGT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY49255 standard; protein; 390 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97 FINITUSFWLRVPKVSASHLE 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure, Fig 18; 89pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                     30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
                                                                                                                           28-AUG-2003; 2003WO-GB003729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21; Conservative
                                                                                                                                                                                                                                    (GLAX ) GLAXO GROUP LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           encapsulated bacteria.
                                                                                                                                                                                                                                                                              Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                         WPI; 2004-239122/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                             N-PSDB; ADL63920
                                          WO2004019975-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 385 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-FEB-2000
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                                                                                  11-MAR-2004.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune CC IL-13 (interleukin-13) element that is capable of driving an immune cresponse by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 cwhile having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, cm human mammalian species, to enhance its immunogenicity. Accordingly, cm nous hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the method results in a reduction in airway hyper-responsiveness (AHR), cm ucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for that airways and skin irritation, as well as reducing the requirement for cerreat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide cmurine IL-13 protein and the tetani p30 peptide under the control of a cmv promoter of the invention. NOTE: This sequence is given in the figure ccounts is not further referred to in the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         immunogenic, IL-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein encoded by the expression plasmid pCDNcIL13p30newFC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 8; Length 3 100.0%; Pred. No. 2.2e-10; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure, Fig 19; 89pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 FNNFTVSFWLRVPKVSASHLE 41
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                                                                                30-AUG-2002; 2002GB-00020212.
28-FEB-2003; 2003GB-00004672.
                              28-AUG-2003; 2003WO-GB003703
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 100.
Les 21; Conservative
                                                                                                                                                              (GLAX ) GLAXO GROUP LTD
                                                                                                                                                                                                                                               Ashman C, Ellis JH;
                                                                                                                                                                                                                                                                                                    WPI; 2004-239121/22.
N-PSDB; ADL63997.
                                                                                                                                                                                             (ASHM/) ASHMAN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 394 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2004019974-A2
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Unidentified.
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ADL64010
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        epitope. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) constructing oligonucleotide molecules that encode peptide epitopes; (b) annealing the oligonucleotides to form duplexes; (c) introducing the duplexes into an expression vector; (d) introducing the expression vector; (d) introducing the expression vector into a host cell; and (e) isolating the fusion protein produced from a culture of the host cells. The carrier protein can be used as a protective immunogen in the control of diseases caused by encapsulated bacteria. The present sequence represents the amino acid sequence of N19 polyepitope carrier protein construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mouse; immunogenic; ID-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; murine; peptide p30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention provides carrier proteins comprising at least 5 CD4+ T cell
                                                                                                                                                                                                                                                                                                                                                 Carrier proteins containing CD4+ epitopes useful for protecting against diseases caused by encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein encoded by the expression plasmid pCDNmIL13p30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADL64009 standard; protein; 394 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure, Fig 8; 76pp; English.
                                                    99WO-IB000844.
                                                                                                         98GB-00008932
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Best Local Similarity 100.0
Matches 21, Conservative
                                                                                                                                                                                                                 Rappuoli R, Grandi G;
                                                                                                                                                                                                                                                                   WPI; 2000-023325/02.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clostridium tetani.
Cytomegalovirus.
                                                                                                                                                            (CHIR-) CHIRON SPA
                                                                                                                                                                                                                                                                                               N-PSDB; AAZ31417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 390 AA;
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                                                    27-APR-1999;
                                                                                                         27-APR-1998;
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04-NOV-1999
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Length 394;

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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune CC IL-13 (interleukin-13) element that is capable of driving an immune CC response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human conference of a human vaccine. The present inventional shape to native human IL-13 sequences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, concreted of skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide is the pCDNCIL13930news conservation plasmid protein sequence of the invention. NOTE: This sequence is given in the figure but is not further conservation.
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goblet call metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
murine; peptide p30.
                                                                                                                                                                                                                                                                                                                                                                                                         New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 112; DB 8; Length 394; 100.0%; Pred. No. 2.2e-10; Live 0; Mismatches 0; Indels (
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                                                               28-AUG-2003; 2003WO-GB003729.
                                                                                                                     30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                         (GLAX ) GLAXO GROUP LTD
                                                                                                                                                                                                                                                               Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                           WPI; 2004-239122/22.
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      11-MAR-2004,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune IL-13 (interleukin-13) element that is capable of driving an immune C IL-13 (interleukin-13) element that is capable of driving an immune c epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate c human vaccine. The present invention describes human chimeric IL-13 sequences as having similar conformational shape to native human II-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, the method results in a reduction in airway hyper-resonsses (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (CDPD), asthma or atopic dermatitis. This polypeptide is the pCDNCIL13p30newFC expression plasmid protein sequence of the invention. NOTE: This sequence is given in the figure but is not further
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                                                                                                                                                                                                                                                                                                                                                                                                                              New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
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                                                                                                            30-AUG-2002; 2002GB-00020212.
28-FEB-2003; 2003GB-00004672.
                                                      28-AUG-2003; 2003WO-GB003703
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                                                                                                                                                                                                (GLAX ) GLAXO GROUP LTD. (ASHM/) ASHMAN C.
                                                                                                                                                                                                                                                                                       Ashman C, Ellis JH;
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Unidentified.
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11-MAR-2004.
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Gaps

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Clostridium tetani.

Cytomegalovirus. Synthetic. Unidentified.

WO2004019975-A2

ADL63971;

RESULT 155

ADL63971

Query Match Local

Matches

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The (G+C) content of the synthetic gene is increased by 47% wrt the native sequence. This eliminates six "terminator" regions which were found to be present in (A+T) rich regions. The terminators (termination/endo-nucleolytic processing/polyadenylation sites) were previously responsible for incomplete transcription of the mRNA. The elimination of these elements (using codon degeneracy) provided for successful expression in yeast of the tetanus toxin fragment C. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                            DNA sequence encoding tetanus toxin fragment C - useful in the manufacture of vaccines for immunity to tetanus utilising yeast as host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vaccine, shed antigen-specific B cell, idiotypic antibody, immune complex-mediated disease, autoimmune disease; tetanus protein,
                                                                                                                                                                                                                                                          Fairweathe NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 2;
100.0%; Pred. No. 2.6e-10;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Amino acid sequence of tetanus toxin fragment C.
                                                                                                                                                                                                                                                       Clare JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84 FNNFTVSFWLRVPKVSASHLE 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB31427 standard; protein; 453 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure, Fig 2; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     humoral immune response; cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Barbera-Guillem E;
                                                                                                        90EP-00312870,
                                                                                                                                              89GB-00026832,
90GB-00006097,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-JUN-2000; 2000WO-US016677.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-JUN-1999; 99US-0139521P.
15-JUN-2000; 2000US-00594985.
                                                                                                                                                                                                             (WELL ) WELLCOME FOUND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21; Conservative
                                                                                                                                                                                                                                                       Makoff AJ, Romanos MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (BIOC-) BIOCRYSTAL LTD
                                                                                                                                                                                                                                                                                                WPI: 1991-166115/23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-080635/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani
                                                                                                                                                                                                                                                                                                                      N-PSDB; AAQ12121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 452 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200076319-A1.
                                                                                                      27-NOV-1990;
                                                                                                                                                 28-NOV-1989;
                                                                                                                                                                     17-MAR-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-DEC-2000.
                                                            05-JUN-1991
                    EP430645-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nelson MB,
                                                                                                                                                                                                                                                                                                                                                                                                           organism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB31427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 158
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, connected a production in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide is the polominially and the tetani p30 peptide under the control of a control of a control of is the ground the tetani p30 peptide under the control of a control of is the proventive referred to in the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                            New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tetanus toxin fragment C encoded by gene with increased G+C content.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 112; DB 8; Length 394; 100.0%; Pred. No. 2.2e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                     /note= "Encoded by CCC"
             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR12471 standard; protein; 452 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure, Fig 19; 89pp; English,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 FNNFTVSFWLRVPKVSASHLE 41
                                                                                                                                                                                                                          30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                  28-AUG-2003; 2003WO-GB003729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 100.
                                                                                                                                                                                                                                                                                       (GLAX ) GLAXO GROUP LID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
                                                                                                                                                                                                                                                                                                                                 Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-239122/22.
                                 Misc-difference 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Terminator; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; ADL63921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 394 AA;
                                                                                                WO2004019975-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-MAR-2003
05-AUG-1991
                                                                                                                                          11-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
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AAR12471;

RESULT 157

AAR1247

Query Match

Matches

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Gaps

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Length 452; Indels

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The present sequence represents a fragment of tetanus protein, which is used as an immunostimulatory protein in vaccines of the invention. The specification describes a method for inducing an immune response reactive with idiotypes present on shed antigen-specific B cells (SAB) of an individual. The method involves administering a vaccine formulation comprising polynucleotide encoding an idiotype of an antibody that binds to an epitope of shed antigen. The method is useful for inducing an immune response reactive with idiotypes present on SAB of an individual. The method is useful for depleting shed antigen-specific B cells, and for treating immune complex-mediated disease progression in organ specific autoimmune disease exacerbated by humoral immune response against groups expressed on shed antigen. Or by plasma cell production of antibodies against groups of shed antigen. It is useful in cancer therapy and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Delivery of a composition to the central nervous system or spinal cord - comprises administration of a non-toxic, proteolytic fragment of tetanus toxin in association with a molecule having biological function.
                 Inducing an immune response against shed antigen-specific B cell idiotypes, by administering a vaccine formulation comprising polymucleotides encoding an idiotypic determinant or peptides comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tetanus toxin fragment C; TTC; central nervous system; CNS; spinal cord; proteolytic fragment; retrograde axonal transport; spinal cord disease; transport; neurodegenerative disease; motoneuron disease; amyotrophic lateral sclerosis; spinal muscular atrophy; therapy; ALS; SMA; neurodegenerative lysosomal storage disease; neuronal mapping.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 112; DB 4; Length 453; 100.0%; Pred. No. 2.6e-10; cive 0; Mismatches 0; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tetanus toxin fragment C protein sequence.
                                                                                                             Example 2; Page 72-73; 81pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brulet P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY00921 standard; protein; 463 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98WO-EP005113.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-0055615P.
97US-0065236P.
                                                                                                                                                                                                                                                                                                                                                                                                    treating autoimmune disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-MAY-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Osta Pinzolas R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.'
Matches 21, Conservative
                                                                         an idiotypic determinant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (INSP ) INST PASTEUR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-180971/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAX27234.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 453 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-AUG-1997;
13-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9909057-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY00921;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 159
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Example 1; Fig 1; 53pp; English

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Gaps

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This sequence represents the tetanus toxin fragment C (TTC). The invention relates to a method for in vivo delivery of a desired composition into a human or animal central nervous system (CNS) or spinal cord comprises administering a non-toxic, proteolytic fragment of tetanus cord comprises administering a non-toxic, proteolytic fragment of tetanus cord comprises administering a non-toxic, proteolytic fragment of tetanus cord composition with at least a molecule having a biological cord interion and where the composition is capable of in vivo retrograde axonal transport and transynaptic transport into the CNS or the spinal cord of the human or animal and of being delivered to different areas of the CNS or the spinal cord. The method can be used for the treatment of thumans or animals with CNS or spinal cord diseases, can compositions (SNA) or neurodegenerative lysosomal storage faseases. Compositions comprising hybrid fragments of TT comprising and mapping and transport of the fragment inside the organism compared with
                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 2; Length 463; 100.0%; Pred. No. 2.7e-10;
                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         343. .357 /note= "Tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Tri-glycine linker"
162. .182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human TNFalpha variant (TNF_T2) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                          AA030491 standard; protein; 514 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Human TNF"
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/note= "Human TNF"
340. .342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       358. .514
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                           1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-NOV-2002; 2002WO-DK000764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .161
                                                                                                                                                                                                                                                                                                                                             21; Conservative
                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                   Sequence 463 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA030491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chimeric
                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 160
                                                                                                                                                                                                                                                                                                                                             Matches
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(PHAR-) (KLYS/) (NIEL/) (BRAT/) (VOLD/)

MOUR/)

us-09-806-703a-14.rag

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNF4) pha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFAIDHa variant protein with 3 hTNF sequences joined by glycine linkers and tetahus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                        New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 514;
                                                                                                                                                                                                                                  Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 112; DB 6; Le
Pred. No. 3e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 319. .321
Joces "Tri-glycine linker"
322. .336
/notes "Tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "Human TNF"
159. 161
/note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                        Claim 23; Page 163-166; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAO30495 standard; protein; 514 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         357
                                                                                                                                                                                                                                Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   162. .318
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Sci
100.0%; Pr
tive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human TNFalpha variant, hTNFT_4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             337 FINFTVSFWLRVPKVSASHLE
                                                                   2001DK-00001702
2001US-0331575P
                                     15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21; Conservative
                                                                                                                                                                                                                              Klysner S, Nielsen FS,
                                                                                                                                KLYSNER S.
NIELSEN F S.
BRATT T.
VOLDBORG B.
                                                                                                                   PHARMEXA AS.
                                                                                                                                                                                                                                                            WPI; 2003-449558/42.
                                                                                                                                                                                               MOURITSEN S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                            N-PSDB; AAL61300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 514 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
Unidentified.
Chimeric.
                                                                   16-NOV-2001;
16-NOV-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-SEP-2003
        22-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA030495;
                                                                                                                                                            (BRAT/)
(VOLD/)
(MOUR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                   (PHAR-)
(KLYS/)
                                                                                                                                                  (NIEL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
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ID AAO3
      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                               The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNPalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNRalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetamus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                       New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 112; DB 6; Length 514;
Pred. No. 3e-10;
; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              337. .357
/note= "Tetanus toxoid P30 epitope"
358. .514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .161
!= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human TNFalpha variant (TNF_T1) protein.
                                                                                                                                                                                                                                   Claim 23; Page 169-171; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FINITIONS FWLRVPKVSASHLE 182
                                                                                                              Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note= "Human INF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'note= "Human TNF'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             358. .514
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٥;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAO30490 standard; protein; 514
                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0
Matches 21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .333
                                                                                                           Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     159. .1
/note=
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PHARMEXA AS.
                KLYSNER S.
NIELSEN F S.
                                                                           MOURITSEN S
                                                                                                                                          WPI; 2003-449558/42
                                               BRATT T.
VOLDBORG B.
                                                                                                                                                         N-PSDB; AAL61301
                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 514 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
Unidentified.
Chimeric.
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162

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RESULT 161

AAO30490;

Key Region Region Region Region Region Region Region

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tummour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                        494. .496
hote= "Tri-glycine linker"
497. .517
/note= "Tetanus toxoid P2 epitope"
                                                                                                     322. .336
/note= "Tetanus toxoid P2 epitope"
337. .493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bratt I, Voldborg B,
                     "Tri-glycine linker"
                                                                                      note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Truncated human CEA-TT P2 and P30 epitopes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 23; Page 175-177; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     497 FINFTVSFWLRVPKVSASHLE 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABR82481 standard; protein; 537 AA
                                                      "Human TNF"
                                                                                                                                                          note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
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                                                                                                                                                                                                                                                                                                                                                              16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                              15-NOV-2002; 2002WO-DK000764
     159. .161
/note= "Tr
162. .318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                     .321
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Klysner S, Nielsen FS,
                                                      note=
                                                                                                                                                                                                                                                                                                                                                                                                            (PHAR-) PHARMEXA AS.
(KLYS/) KLYSNER S.
(NIEL/) NIELSEN F S.
(BRAT/) BRATT T.
(VOLD/) VOLDBORG B.
(MOUR/) MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-449558/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAL61302.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 517 AA;
                                                                                                                                                                                                                                                             WO2003042244-A2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNF, TNFalbha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein. The variant comprises 3 hTNF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                              Bratt T, Voldborg B, Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                 494. .514
/note= "Tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 23; Page 191-193; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
2. .158
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAO30492 standard; protein; 517 AA
337. .493
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human TNFalpha variant protein #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 FINNETVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                494 FINIFIVSFWLRVPKVSASHLE
                                                                                                                                                                                      16-NOV-2001; 2001DK-00001702.
                                                                                                                                                        15-NOV-2002; 2002WO-DK000764
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es 21; Conservative
                                                                                                                                                                                                                                                                                                                                                              Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                           KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2003-449558/42.
N-PSDB; AAL61305.
                                                                                                                                                                                                                                         PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                           MOURITSEN S
                                                                                                                                                                                                                                                                                                         VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 514 AA;
                                                                                     WO2003042244-A2
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Unidentified.
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                                                                                                                    22-MAY-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                         (PHAR-)
                                                                                                                                                                                                                                                        (KLYS/)
(NIEL/)
(BRAT/)
(VOLD/)
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Region
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Matches
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AA030492

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New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                   Gene product comprises a tetanus toxin fragment, which may be expressed in a transformed host, and used as an antigen in vaccine production, against the disease. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neuronal cell; binding domain; translocation domain; stroke; epilepsy; tumour; infection; neurodegenerative disease; gene therapy; chimeric; diphtheria neurotoxin; tetanus neurotoxin; TeNT.
                                                                                                                                                                  Cloned DNA sequence coding for tetanus toxin - or its fragments contg. epitope used to express antigens for vaccine prodn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a non toxic polypeptide, for delivery of
                                                                                                                                                                                                                                                                                                                       Length 573;
                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 112; DB 1; Best Local Similarity 100.0%; Pred. No. 3.4e-10; Matches 21; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified clostridial heavy chain fragment #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MICR-) MICROBIOLOGICAL RES AUTHORITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE07897 standard; protein; 605 AA.
                                                                                                                                                                                                                                                                                                                                                                                          205 FNNFTVSFWLRVPKVSASHLE 225
                                                                                                                                                                                                                                                                                                                                                                          1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 2; Page 45; SOpp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Silman N;
                                                                                                                                                                                                         Claim 4; Fig 1; 36pp; English.
                  86EP-00305029
                                             85GB-00016442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-DEC-2000; 2000WO-GB004644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-DEC-1999; 99GB-00028530.
07-APR-2000; 2000GB-00008658.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Corynebacterium diphtheriae.
Clostridium tetani.
                                                                     (WELL ) WELLCOME FOUND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sutton JM,
                                                                                                                          WPI; 1987-015999/03.
N-PSDB; AAN70545.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-514643/56.
                                                                                                                                                                                                                                                                                          Sequence 573 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200158936-A2
                                                                                                  Fairweathe NF;
                                            28-JUN-1985;
                  27-JUN-1986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-SEP-2003
01-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shone CC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE07897;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAE0789.
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                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCB) in the animal of at least 1 modified CEA polypeptide or of a mucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a truncated human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                         Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Portion of B fragment and all of the C fragment of tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 7;
100.0%; Pred. No. 3.1e-10;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 134-137; 140pp; English.
                                                       1. .34
/note= "signal peptide"
                                                                                              /note= "mature protein"
                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAP70345 standard; protein; 573 AA
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                                                                                                                                                                                                     17-JAN-2002; 2002DK-00000082.
                                                                                                                                                                            17-JAN-2003; 2003WO-DK000031
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(first entry)
                                                                             .537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                        Voldborg
                                                                                                                                                                                                                                              (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                 WPI; 2003-587260/55.
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Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani.
                                                                                                                                                                                                                                                                                                                N-PSDB; ACF35968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 537 AA;
                                                                                                                      WO2003059379-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in its sequence
                                                                                                                                                                                                                                                                                                                                                                                    polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-MAR-2003
22-APR-1991
                                                                                                                                                                                                                                                                        Klysner S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TT; vaccine
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              Synthetic
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                                                                               Protein
                                                      Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 165
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ID AAP7
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Gaps

us-09-806-703a-14.rag

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therapeutic agent to a neuronal cell, which comprises a binding domain (arboxy terminal half of heavy chain (HC) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocates the therapeutic agent into the neuronal cell, where the translocates the therapeutic domain of a clostridial neurotoxin and is not a fragment or derivative of a HN domain of a clostridial neurotoxin and is not a fragment or derivative of a useful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for reat disorders of the CNS including neurodegenerative diseases, stroke, epilepsy, brain tumours and infection. They are also useful in gene therapy. The present sequence is modified clostridial heavy chain fragment. This sequence is constructed by fusing the truncated binding domain of tetanus neurotoxin (TPL) with translocation domain of diphtheria neurotoxin. (Updated on 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                 -SEP-2003 to standardise OS field)
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Best Local Similarity
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Matches
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Gaps ö 100.0%; Score 112; DB 4; Length 605; 100.0%; Pred. No. 3.6e-10; ive 0; Mismatches 0; Indels 235 FNNFTVSFWLRVPKVSASHLE 255 71 FNNFTVSFWLRVPKVSASHLE 21; Conservative

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Chimeric; copper-zinc superoxide dismutase; SOD-1; TTC; SOD:Tet451; retamus toxia fragment C; teteanus holotoxin; nerve cell; stroke; neurological disorder; oxidative stress; brain hypoxia-reperfusion; epilepsy; Parkinson's disease; Huntington's disease. AAW48909 standard; protein; 618 AA. (first entry) SOD-1/TTC hybrid protein. (revised) 17-OCT-2003 23-SEP-1998 AAW48909; RESULT 167 AAW48909

Location/Qualifiers /note= "TTC moiety" /note= "SOD-1" .618 Homo sapiens. Clostridium tetani. Chimeric. Key Region Region

US5780024-A.

14-JUL-1998

96US-00668381. 21-JUN-1996; 95US-0000473P.

23-JUN-1995;

(GEHO) GEN HOSPITAL CORP. (UYMA-) UNIV MARYLAND BALTIMORE.

Brown RH, Francis JW, Fishman PS, Hosler BA;

WPI; 1998-412999/35. N-PSDB; AAV32580. New hybrid protein of superoxide dismutase and tetanus toxin fragment C - having increased uptake by neurons and retention of enzymatic activity in these cells, for treating neurological diseases associated with oxidative

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The present sequence represents an enzymatically active human copper-zinc superoxide dismutase (SOD-1) fused at its carboxyl terminus with the tetanus toxin fragment C (TTC) moiety. The TTC moiety constitutes amino-acid residues 865-1315 of the tetanus holotoxin. The hybrid protein, referred as SOD:Tet451, is claimed to have the following properties: (a) it exhibits Cu/Zn SOD enzymatic activity; (b) the TTC moiety selectively binds to nerve cells and allows uptake of the hybrid protein into these cells; and (c) it retains substantial SOD enzymatic activity following neurological disorders associated with oxidative stress, e.g. stroke, brain hypoxia-reperfusion, epilepsy, Parkinson's and Huntington's diseases. (Updated on 17-OCT-2003 to standardise OS field)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      250 FNNFTVSFWLRVPKVSASHLE 270
                                         Claim 7; Col 23-26; 23pp; English.
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Best Local Similarity 100...
Local Similarity 100...
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Shed antigen-specific B cell antigen linked to tetanus toxin fragment C. Vaccine; shed antigen-specific B cell; idiotypic antibody; immune complex-mediated disease; autoimmune disease; tetanus protein; AAB31429 standard; protein; 661 AA. humoral immune response; cancer. (first entry) 26-APR-2001 AAB31429; AAB31429

RESULT 168

16-JUN-1999; 99US-0139521P. 16-JUN-2000; 2000WO-US016677. Clostridium tetani. WO200076319-A1. 21-DEC-2000. Synthetic

Nelson MB, Barbera-Guillem (BIOC-) BIOCRYSTAL LTD. WPI; 2001-080635/09.

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Inducing an immune response against shed antigen-specific B cell idiotypes, by administering a vaccine formulation comprising polynucleotides encoding an idiotypic determinant or peptides comprising idiotypic determinant

Example 2; Page 73-76; 81pp; English.

The present sequence represents a fusion protein, comprising a protein used for immunising against shed antigen-specific B cells linked to a fragment of tetanus protein. It is used in vaccines of the invention. The specification describes a method for inducing an immune response reactive with idiotypes present on shed antigen-specific B cells (SAB) of an individual. The method involves administering a vaccine formulation

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comprising polynucleotide encoding an idiotype of an antibody that binds to an epitope of shed antigen. The method is useful for inducing an immune response reactive with idiotypes present on SAB of an individual. The method is useful for depleting shed antigen-specific B cells, and for treating immune complex-mediated disease progression in organ specific autoimmune disease exacerbated by humoral immune response against groups expressed on shed antigen, or by plasma cell production of antibodies against groups of shed antigen. It is useful in cancer therapy and for treating autoimmune disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (carboxy terminal half of heavy chain (HC) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocates the therapeutic agent into the neuronal cell, where the translocation domain is not a HN domain of a clostridial neurotoxin and is not a fragment or derivative of a HN domain of a clostridial toxin. Polypeptides of the invention are useful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful to treat disorders of the CNS including neurodegenerative diseases, stroke, epilepsy, brain tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
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                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                           DB 4; Length 661;
                                                                                                                                                                                                                                           Score 112,
Pred. No. 4e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified clostridial heavy chain fragment #2.
                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                         100.0%; Score 112; 100.0%; Pred. No. 4e
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                                                                                                                                                                                                                                                                                                                                             293 FNNFTVSFWLRVPKVSASHLE 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAE07895 standard; protein; 665 AA.
                                                                                                                                                                                                                                                                                                                     1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Silman N;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                21; Conservative
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                                                                                                                                                                                                                                                              Local Similarity
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                                                                                                                                                                                                     Sequence 661 AA;
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01-NOV-2001
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The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, preventing and reversing damage to cells; killing cells; promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory inhibiting and reversing damage to cells; killing cells; promoting or inhibiting and reversing or cells, and treating intracellular infection, for interfering with intracellular cell, for intracellular infection, for interfering with intracellular cell, for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell-surface markers and for inhibiting secretion from cells. The invention is also useful for treating Prion disease, Alzheimer' disease and wide range of disorders including muscle spasms such as blephorospasm, torticolis and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
    The present sequence
and infection. They are also useful in gene therapy. The present sequence is modified clostridial heavy chain fragment. This sequence is constructed by fusing the binding domain of tetanus neurotoxin (TeNT) with translocation domain of diphtheria neurotoxin. (Updated on 11-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Apoptosis; therapy; inflammatory mediator; intracellular trafficking; infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spasm; CODD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; Hc; binding domain;
                                                                                                                                                                                                     Gaps
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                                                                                                                                                                Length 665;
                                                                                                                                                                                                       0; Indels
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                                                                                                                                                              100.0%; Score 112; DB 4; 100.0%; Pred. No. 4e-10;
                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DipT HN domain-TeNT-Hc fusion construct.
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                                                                                                                                                                                                                                                                                                                                                                                    AAE35689 standard; protein; 665 AA.
                                                                                                                                                                                                                                                                                  295 FINFTVSFWLRVPKVSASHLE 315
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                                                                                                                                                                                                                                             FINIFTVSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Corynebacterium diphtheriae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                     21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (revised)
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                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium tetani
                                                                                                                        Sequence 665 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chimeric.
                                                                                                                                                                                                                                                                                                                                               RESULT 170
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hypersecretion disorders such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion construct comprising Corymebacterium diphtheriae diphtheria toxin translocation domain (Dip-HN domain) and Clostridium tetani tetanus neurotoxin binding domain (TeNt-HC). This sequence is used in the exemplification of the invention. (Updated on 23-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, preventing and reversing damage to cells, killing cells; promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell, for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell-surface markers and for inhibiting secretion from cells. The invention is also useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Apoptosis; therapy; inflammatory mediator; intracellular trafficking; infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spasm; COPD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; HC; binding domain.
                                                                                                                                                                                                             Gaps
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                                                                                                                                                                        Length 665;
                                                                                                                                                                                                             0; Indels
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                                                                                                                                                                                            4e-10;
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                                                                                                                                                                      100.0%; Score 112; D
100.0%; Pred. No. 4e-
ive 0; Mismatches
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                                                                                                                                                                                                                                                                      FINETVSFWLRVPKVSASHLE 315
                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                              AAE35690 standard; protein; 677
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Corynebacterium diphtheriae
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shone CC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-167247/16.
                                                                                                                                                                                          Local Similarity
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Unidentified.
                                                                                                                                   Sequence 665 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                      AAE35690;
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                                                                                                                                                                        Query Match
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treating Prion disease, Alzheimer' disease and wide range of disorders

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including muscle spasms such as blephorospasm, torticolis and hypersecretion disorders such as chronic obstructive pulmonary disease (CDDD), bronchitis and asthma. The present sequence is a fusion construct comprising Corynebacterium diphtheriae diphtheria toxin translocation domain (DIPT-HN domain), Clostridium tetani tetanus neurotoxin binding domain (TeMT-Hc) and thrombin linker peptide. This sequence is used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, preventing and reversing damage to cells, killing cells, promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell, for intracellular infection, for interfering with intracellular trafficking, for modularing expression of cell-surface markers and for inhibiting secretion from cells. The invention is also useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      infection, Prion disease, Alzheimer' disease; hypersecretion disorder; muscle spasm, ODD!, Pronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; HC;
                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Apoptosis, therapy; inflammatory mediator; intracellular trafficking;
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                                                                                                                                                                                                         Length 677;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TeNT-Hc-DipT HN domain-factor Xa linker fusion construct.
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                                                                                                                                                                                                       100.0%; Score 112; DB 6; 100.0%; Pred. No. 4.1e-10;
                                                                                                                                                                                                                                           Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MICR-) MICROBIOLOGICAL RES AUTHORITY
                                                                                                                         the exemplification of the invention
                                                                                                                                                                                                                                                                                                       307 FINFTVSFWLRVPKVSASHLE 327
                                                                                                                                                                                                                                                                                                                                                                                                                        AAE35691 standard; protein; 677 AA
                                                                                                                                                                                                                                                                                  21
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                                                                                                                                                                                                                                                                                1 FUNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-MAY-2001; 2001GB-00012687.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Corynebacterium diphtheriae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sutton JM, Shone CC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2003-167247/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium tetani.
Unidentified.
                                                                                                                                                                                                                         Similarity
                                                                                                                                                                Sequence 677 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    binding domain.
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                                                                                                                                                                                                Query Match
Best Local Simil
Matches 21; C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAE35691;
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                                                                                                                                                                                                                                                                                                                                                                                                       AAE3569
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c antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 E-cell group derived from the cell-associated PA, and (2) at least 1 first T helper cell group which is forthy murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least noe foreign T helper epitopes of the respective PA and including to the treat prostate, prostate, prostate, prostate or breast cancer when the PA is human PSM, FGF8b and Har2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tumor associated peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; PSM; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                          100.0%; Score 112; DB 3; Length 693; 100.0%; Pred. No. 4.2e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mutant human PSM antigen splice variant construct, hPSM'8.3.
                                                                                                                                                                                                                                                                                                                       Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inducing immune responses to weakly immunogenic, tumor as antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153. .173
/label= P30
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      549. :563
/label= P2
/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY92648 standard; protein; 693 AA.
                                                                                                                                                                                                                                                                                                                                                                           153 FINFTVSFWLRVPKVSASHLE 173
                                                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                    1 FNNFTVSFWLRVPKVSASHLE
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Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98DK-00001261.
98US-0105011P.
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                                                                                                                                                                                                                             the specification
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                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                          Sequence 693 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200020027-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY92648;
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treating Prion disease, Alzheimer' disease and wide range of disorders including muscle spasms such as blephorospasm, torticolis and hypersecretion disorders such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion construct comprising Corynebacterium diphtheriae diphtheria toxin translocation domain (DIPT-HN domain), Clostridium tetani tetanus neurotoxin binding domain (DIPT-HN and factor Xa linker peptide. This sequence is used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prostate specific membrane antigen; immunogenized construct; mutant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vaccination, cytotoxic T-lymphocyte immunity, breast cancer, PSM, prostate cancer, cell-associated peptide antigen, foreign epitope.
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                                                                                                                                                                              Length 677;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Mutant human PSM antigen splice variant construct, hPSM'6.3.
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                                                                                                                                                                                                         Indels
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                                                                                                                                                                   Score 112; DB 6; Pred. No. 4.1e-10; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         391...405
/label= P2
/note= "foreign epitope"
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/note= "foreign epitope"
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                                                                                                               the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  location/Qualifiers
                                                                                                                                                                                                                                                          FINETVSFWLRVPKVSASHLE 327
                                                                                                                                                                                                                                                                                                                                              AAY92647 standard; protein; 693 AA.
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                                                                                                                                                                                                                                       1 FNNFTVSFWLRVPKVSASHLE
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                                                                                                                                                                           100.0%;
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98US-0105011P,
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                                                                                                                                                                                                         21; Conservative
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                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                              Sequence 677 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-OCT-1999;
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20-OCT-1998;
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                                                                                                                                                                                                                                                                     307
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CC AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are confirmed to the immunogenic cell-associated bends are confirmed as those associated with cancers (self-proteins), e.g. immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. thuan prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGR8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and (Or at least 18 -cell group derived from the C cell-associated PA, and (2) at least 18 -cell group which is foreign to the animal. Analogues of human PSM, human Her2 and c predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used contracted from the wild type human PSM (AAY92619), which appears on pages 184-187 cof the specification Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer. Prostate specific membrane antigen; splice variant; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope. 100.0%; Score 112; DB 3; Length 693; 100.0%; Pred. No. 4.2e-10; vative 0; Mismatches 0; Indels Haaning J, Leach D, Mutant murine PSM splice variant construct, mPSM'X. an S, Nielsen KG, Karlsson G; Location/Qualifiers AAY92661 standard; protein; 698 AA. 153 FNNFTVSFWLRVPKVSASHLE 173 1 FNNFTVSFWLRVPKVSASHLE 21 99WO-DK000525. 98DK-00001261. 98US-0105011P. 197. .217 /label= P30 10-AUG-2000 (first entry) Best Local Similarity 100. Matches 21; Conservative (MEBI-) M & E BIOTECH AS. Mouritsen WPI; 2000-349917/30. Birk P, Sequence 693 AA; WO200020027-A2 musculus. 05-OCT-1999; 05-OCT-1998; 20-OCT-1998; 13-APR-2000. Mus musculu Synthetic. Steinaa L, Gautam A, AAY92661; Query Match Peptide RESULT 175 8\$ δ 셤

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AAY92659-62 are mutant immunogenized murine prostate specific membrane antigen (PSM) constructs, which contain a foreign epitope, P30. The analogues can be used to study whether autocolerance to mouse PSM can be used to study whether autocolerance to mouse PSM can be used to broken in mice by immunisation and/or DNA vaccination against murine PSM can be used in mice by immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. The method is used for inducing immune responses against weakly immunogenic cell-cassociated peptide antigens (PA) such as those associated with cancers (CSII proteins), e.g. human PSM, heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultensous presentation by antigen producing cells (APC8) of the animals immune cystem of: (1) at least 1 18-coll group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the infinal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper cell comprising a substantial part of all known and predicted CTL and B-cell cepitopes are also claimed. The method is used to treat prostate, prostate, presented from the murine CRA, respectively. Note: This sequence was constructed from the murine PSM SPM splice variant (AAY92624), which appears on pages 210-213 of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Prostate specific membrane antigen, splice variant, mutant, vaccination, cytotoxic T-lymphocyte immunity, breast cancer, prostate cancer, cell-associated peptide antigen, foreign epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mutant murine PSM splice variant construct, mPSM'Y.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  197 FNNFTVSFWLRVPKVSASHLE 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE 21
                 Example 1; Page; 220pp; English.
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Birk P, Karlsson G;
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/label= P30
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Best Local Similarity
Matches 21; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            specification
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20-OCT-1998;
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WPI; 2000-349917/30.

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Sequence 703 AA;
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Peptide
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AAY92659-62 are mutant immunogenized murine prostate specific membrane antigen (PSM) constructs, which contain a foreign epitope, P30. The canalogues can be used to study whether autocolerance to mouse PSM can be used in mice by immunisation and/or DNA vaccination against murine PSM analogues. Immunogenic analogues of PSM can be used in the claimed method as an autovoaccine to induce a CTL response. The method is used for inducing immune responses against weakly immunogenic cellassociated peptide antigens (PA) such as those associated with cancers (SAIF-protein)), e.g. human PSM, heregulin 2 (Herz) and/or fibroblast cypresentation by antigen producing cells (APCS) of the animals immune cyptem of it at least 1 B-cell group derived from the cell-associated PA and/or at least 1 B-cell group derived from the coll-associated PA and (2) at least 1 B-cell group derived from the coll-associated PA and (2) at least 1 B-cell group derived from the Goreign to the comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper CC epitopes are also claimed. The method is used to treat prostate, prostate, prostate, breast cancer when the PA is human PSM, FGFBb and Herz, respectively. Note: This sequence was constructed from the mutine constructed incorrection or energies or the expectively, which appears on pages 210-213 of the tumor associated peptide Inducing immune responses to weakly immunogenic, tumor as antigens for the treatment of breast and prostate cancer. Example 1; Page; 220pp; English. specification

ó Gaps . 0 Length 703; 0; Indels 100.0%; Score 112; DB 3; 100.0%; Pred. No. 4.3e-10; ive 0; Mismatches 0; 631 FNNFTVSFWLRVPKVSASHLE 651 21 1 FNNFTVSFWLRVPKVSASHLE 21; Conservative Query Match Best Local Similarity

Modified human CEA-TT P2 and P30 epitopes. ABR82479 standard; protein; 708 (first entry) 20-NOV-2003 Synthetic. ABR82479;

CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.

 .34
 /note= "signal peptide" "mature protein" Location/Qualifiers .708 Protein

WO2003059379-A2

24-JUL-2003

17-JAN-2003; 2003WO-DK000031. 17-JAN-2002; 2002DK-0000082. 17-JAN-2002; 2002US-0350047P.

(PHAR-) PHARMEXA AS.

Voldborg B; Klysner S,

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The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least I modified CEA polypeptide or of a mucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                              Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 708;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 112; DB 7;
100.0%; Pred. No. 4.3e-10;
                                                                                                                                                                                    Disclosure; Page 121-124; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FUNFTVSFWLRVPKVSASHLE
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                     WPI; 2003-587260/55.
N-PSDB; ACF35966.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 708 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                           in its sequence
                                                                                                                                                 polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21;
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CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen. Modified human CEA-TT P2 and P30 epitopes. Ź ABR82480 standard; protein; 713 20-NOV-2003 ABR82480; RESULT 178 ABR82480

642 FNNFTVSFWLRVPKVSASHLE 662

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1. .34 /note= "signal peptide" /note= "mature protein" Location/Qualifiers WO2003059379-A2. 24-JUL-2003. Key Peptide Protein

Synthetic.

17-JAN-2003; 2003WO-DK000031.

17-JAN-2002; 2002DK-0000082. (PHAR-) PHARMEXA AS

WPI; 2003-587260/55. N-PSDB; ACF35967.

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Klysner S, Voldborg

Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a

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The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCS) in the animal of at least 1 modified CEA polypeptide or of a mucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
 nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CEA; immune response; carcinoembryonic antigen, antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.
                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                             Length 713;
                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                            Score 112; DB 7;
Pred. No. 4.3e-10;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified human CEA-TT P2 and P30 epitopes.
                                        Disclosure; Page 128-131; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 114-117; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .34
/note= "signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                  533
                                                                                                                                                                                                                                                                                                                                                                                                                                        ABR82478 standard; protein; 717 AA
                                                                                                                                                                                                                                                                                                                                       21
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                                                                                                                                                                                                                                                                                                                                                       FINETVSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                             100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                         Local Similarity 100.
1es 21; Conservative
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                                                                                                                                                                                                                                                  Sequence 713 AA;
                                                                                                                                                                                                                       in its sequence
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                polypeptide.
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                                                                                                                                                                                                                                                                                                                                                                 513
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                                                                                                                                                                                                                                                                               Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 179
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Matches
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The invention relates to inducing an immune response against autologous

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carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least I modified CEA polypeptide or of a nucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dalum I;
                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mutant human prostate specific membrane antigen construct, hPSM2.1.
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                                                                                                                                                                                                           Length 717;
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                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                        100.0%; Score 112; DB 7;
100.0%; Pred. No. 4.4e-10;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                AAY92637 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                            693 FUNFTVSFWLRVPKVSASHLE 713
                                                                                                                                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE 21
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/note= "foreign
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/label= P2
                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                       21; Conservative
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                                                                                                                                                                                                                        Similarity
                                                                                                                                                                          Sequence 717 AA;
                                                                                                                                               in its sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
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                                                                                                                                                                                                          Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide
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                                                                                                                                                                                                                                                                                                                                                    RESULT 180
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Matches
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preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APC9) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 First T helper cell group which is correign to the animal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial part of all known and coredicted CTL and B-cell spitopes of human PSM, human Her2 and coredicted CTL and B-cell epitopes are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGP8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187

Sequence 750 AA;

Gaps ; 0 100.0%; Score 112; DB 3; Length 750; 100.0%; Pred. No. 4.6e-10; ive 0; Mismatches 0; Indels (1 FNNFTVSFWLRVPKVSASHLE 21 Query Match
Best Local Similarity 100.0
Matches 21, Conservative à g

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21 FNNFTVSFWLRVPKVSASHLE 41

RESULT 181 AAY92639

AAY92639 standard; protein; 750 AA. AAY92639;

10-AUG-2000 (first entry)

Mutant human prostate specific membrane antigen construct, hPSMS.1.

Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.

Homo sapiens Synthetic. Location/Qualifiers Peptide

/label= P30 /label= P30 /note= "foreign epitope" 305. 319 /label= P2 /note= "foreign epitope"

Peptide

WO200020027-A2.

13-APR-2000

99WO-DK000525. 05-OCT-1999;

98DK-00001261. 98US-0105011P. 20-OCT-1998; 05-OCT-1998;

(MEBI-) M & E BIOTECH AS.

Dalum 1; Nielsen KG, Haaning J, Leach D, Karlsson G; Mouritsen S, Birk P, Steinaa L, Gautam A,

WPI; 2000-349917/30.

Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.

autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogeniz cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (FRM), hereagulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animal immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 B-cell group which is forup derived from the Analogues of human PSM, human Herz and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign to the animal. Analogues of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or a last cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 194-187 of the specifical constitution. AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an Example 1; Page; 220pp; English. the specification Sequence 750 AA;

Gaps . Length 750; Indels 100.0%; Score 112; DB 3; 100.0%; Pred. No. 4.6e-10; Mismatches ő 21; Conservative Best Local Similarity Query Match Matches

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1 FNNFTVSFWLRVPKVSASHLE 21

à g

10-AUG-2000

Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.

/label= P30 /note= "foreign epitope" Location/Qualifiers Peptide

05-OCT-1998;

(MEBI-) M & E BIOTECH AS.

21 FNNFTVSFWLRVPKVSASHLE 41

RESULT 182 AAY92628

AAY92628 standard; protein; 750 AA.

AAY92628;

(first entry)

Mutant human prostate specific membrane antigen construct, hPSM6.1.

Homo sapiens. Synthetic.

448. .462 /label= P2 /note= "foreign epitope"

Peptide

WO200020027-A2

13-APR-2000

99WO-DK000525. 05-OCT-1999; 98DK-00001261. 98US-0105011P. 20-OCT-1998;

Dalum I; Steinaa L, Mouritsen S, Nielsen KG, Haaning J, Leach D,

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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cystein residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immuno responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGR8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) crowing from the PA and (Or at least 1B -cell group derived from the CC animals immune system of at least 1 Eirst T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and predicted CTL and B-cell epitopes of the respective PA and including at cell-associated PA; and (1) at least of human fact of the method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGFBb and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 coff the specification
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                                                                        Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mutant human prostate specific membrane antigen construct, hPSM1.6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 750;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 3;
100.0%; Pred. No. 4.6e-10;
ilve 0; Mismatches 0;
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/label= P2
/note= "foreign epitope"
443. .463
/label= P30
/note= "foreign epitope"
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                                                                                                                                 Example 1; Page; 220pp; English.
Birk P, Karlsson G;
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                                     WPI; 2000-349917/30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 750 AA;
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 Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenized as an electronic analogues of PSM can be used in the claimed method as an attowactine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are concerned in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenize cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. thuan prostate specific membrane antigen (PSM), heregulin 2 (HBr2) and/or fibroblast growth factor 8D (FGPB). The method comprises effecting simultaneous presentation by antigen producing cells (APCB) of the alimane system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) contines immune system of: (1) at least 1 Effect T helper cell group which is group derived from the PA and/or at least 1 first T helper cell group which is coll-associated PA; and (2) at least 1 first T helper cell group which is contained. The animal Analogues of the respective PA and including at predicted CTL and B-cell epitopes of the respective PA and including at content prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8B and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                            Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                   Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mutant human prostate specific membrane antigen construct, hPSM8.3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 112; DB 3; Length 750; 100.0%; Pred. No. 4.6e-10; ive 0; Mismatches 0; Indels (
                                                                                                                 Haaning J, Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               210. .230
/label= p30
/noce="foreign epitope"
606. .620
/label= p2
                                                                                                                 Nielsen KG,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY92645 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        443 FNNFTVSFWLRVPKVSASHLR 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                       Example 1; Page; 220pp; English.
                                                                                                             Steinaa L, Mouritsen S, Nielse
Gautam A, Birk P, Karlsson G;
                  98DK-00001261.
98US-0105011P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Local 21; Conservative
The 21; Conservative
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                                                                        (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of the specification
                                                                                                                                                                        WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 750 AA;
                  05-OCT-1998;
20-OCT-1998;
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Synthetic.
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Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 184
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Dalum I;

Haaning J, Leach D,

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Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
/note= "foreign epitope"
                                                                                      Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                  AAY92627 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                                                                                              210 FNNFTVSFWLRVPKVSASHLE 230
                                                                                                                                           Example 1; Page; 220pp; English.
                                                                                     Mouritsen S, Niels
Birk P, Karlsson G;
                                        99WO-DK000525.
                                                            98US-0105011P.
                                                     98DK-00001261
                                                                                                                                                                                                                                                                                                                                                                                                                             10-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                Local Similarity 100.
es 21; Conservative
                                                                        (MEBI-) M & E BIOTECH AS.
                                                                                                         WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                              Sequence 750 AA;
              WO200020027-A2
                                        35-OCT-1999;
                                                     05-OCT-1998;
                                                            20-OCT-1998;
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Synthetic.
                          13-APR-2000
                                                                                    Steinaa L,
                                                                                            Gautam A,
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Matches
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AAY92627-49 are mutant immunogenized human prostate specific membrane antiquen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immuno responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGP8b). The method comprises effecting simular system of: (1) at least 1 B-cell group derived from the PA and/or at least 1 B-cell group derived from the CC animals immune system of: (1) at least 1 B-cell group derived from the CC animal. Analogues of human PSM, human Her2 and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 con the specification
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1 FNNFTVSFWLRVPKVSASHLE 21

Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope. Mutant human prostate specific membrane antigen construct, hPSM1.1.

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Affiliation (PSM) constructs, which contain probleme upperints memorane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with canners (Belf-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting cannume system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) cannume system of: (1) at least 1 E-cell group derived from the animal. Analogues of human PSM, human Herz and chuman/murine FGF8b comprising a substantial part of all known and chuman/murine FGF8b comprising a substantial part of all known and characted of the respective PA and including at least one foreign T helper epitopes of the respective PA and including at least one foreign T helper patrope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the annumed to the annumed PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                              Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                            Haaning J,
                                                                                             32..52
/label= P30
/note= "foreign epitope"
                                                                            'note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                            Nielsen KG,
                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                          Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
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                                                         /label= P2
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                                                                                                                                                                                                                                                                05-OCT-1999;
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20-OCT-1998;
                                                                                                                                                                                                                         13-APR-2000.
                                  Peptide
                                                                                                  Peptide
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Gaps ö Length 750; Indels 100.0%; Score 112; DB 3; 100.0%; Pred. No. 4.6e-10; ive 0; Mismatches 0; Query Match
Best Local Similarity luv...
Local Similarity luv...
21; Conservative

Sequence 750 AA;

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ò 셤 RESULT 186

AAY92632 standard; protein; 750 AA. 10-AUG-2000 (first entry) AAY92632; BXHXHXB

Mutant human prostate specific membrane antigen construct, hPSM1.8.

AAY92638 standard; protein; 750 AA.

(first entry)

10-AUG-2000

AAY92638;

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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenized speak can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are conserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenized peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 FFFBD). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animal. Analogues of human PSM, human Her2 and cell-associated PA; and (2) at least 1 first T helper cell group which is coell-associated PA; and (2) at least 1 first T helper cell group which is coell-associated PA; and (2) at least 1 first T helper cell group which is coell-associated PA; and (2) at least 1 first T helper cell group which is coell-associated PA; and (2) at least 1 first T helper cell group which is coell-associated PA; and (2) at least 1 first T helper cell group which is coell-associated PA; and (2) at least 1 first T helper cell group which is coell-associated PA; and (2) at least 1 first T helper cell group which is coedicted CTL and B-cell epitopes of the respective PA and including at the predicted CTL and B-cell epitopes of the respective PA and including at the predicted CTL and B-cell epitopes or breast cancer when the PA is human PSM, FGF8b and Her2, respectively. Which appears on pages 184-187 of the animal type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                  Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Haaning J, Leach D,
                                                                                                                                                                                                                                                                  507. .627
/label= p30
/note= "foreign epitope"
                                                                                                                                                                                                  14. .38
|Tabel= P2
|note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nielsen KG,
                                                                                                                                                                               ocation/Qualifiers
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Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-DK000525.
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                                                                                                                                                                                                                                                                                                                                                                 WO200020027-A2
                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-OCT-1999;
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                                                                                                                                    Synthetic
                                                                                                                                                                                                  Peptide
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Dalum I;

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Length 750;
100.0%; Score 112; DB 3;
100.0%; Pred. No. 4.6e-10;
ive 0; Mismatches 0;
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Query Match Best Local Similarity 100.0 Matches 21; Conservative

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Gaps

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Indels

21 FINIFTVSFWLRVPKVSASHLE -607

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RESULT 187 AAY92638

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The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factors BD (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytocoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human/muxine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY92627-49 are mutant immunogenized human prostate specific membrane
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                                                                                                                                             Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                         Mutant human prostate specific membrane antigen construct, hPSM3.1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Haaning J,
                                                                                                                                                                                                                                                                                                                                                                  /label= P2
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                               21. .41
/label= P30
/note= "foreign epitope"
213. .227
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                                                                                                                                                                                                                                                                            Location/Qualifiers
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Best Local Similarity 100.
Matches 21; Conservative
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                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                           Peptide
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Page

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Gaps

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Indels

Length 750;

100.0%; Score 112; DB 3; 100.0%; Pred. No. 4.6e-10; 0; Mismatches

Query Match
Best Local Similarity 100.
Matches 21; Conservative

Sequence 750 AA;

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21 FINFTVSFWLRVPKVSASHLE 41

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FINIFIVSFWLRVPKVSASHLE

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Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                                                                                   Mutant human prostate specific membrane antigen construct, hPSM10.1.
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/label= P30
/note= "foreign epitope"
674. .688
/label= P2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .ocation/Qualifiers
                                                                                                                                                     AAY92630 standard; protein; 750 AA.
                                           41
FUNFTVSFWLRVPKVSASHLE 21
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Gautam A, Birk P, Karlsson G;
                           21 FNNFTVSFWLRVPKVSASHLE
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                                                                                                         RESULT 188
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Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.

Mutant human prostate specific membrane antigen construct, hPSM1.10.

(first entry)

10-AUG-2000

AAY92633;

AAY92633 standard; protein; 750 AA

189

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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (BSM) constructs, which contain foreign epitopes (P2 and/or P30). The fimunogenic analogues of PSM can be used in the calaimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGFBD). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) cropped from the PA and/or at least 1 B-cell group derived from the cell-associated PA, and (2) at least 1 iffst T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Haaning J,
                                                                                                                                                                                                                                              24. .38
/label= P2
/note= "foreign epitope"
673. .693
                                                                                                                                                                                                                                                                                           673. .693
/label= P30
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mouritsen S, Nielsen KG,
                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gautam A, Birk P, Karlsson G;
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                                                                                                                                                                                 Homo sapiens.
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20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                    13-APR-2000.
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                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                           Peptide
                                                                                                                                                                                                                                                                                           Peptide
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteliar residues involved in disulfide bonds are conferenced in the immunogenized forms. The method is used for inducing cimmune responses against weakly immunogenic cell-associated peptide cimmune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. numan proteate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGF8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) croup derived from the PA and (2) at least 1 Breal group derived from the C animals immune System of: (2) at least 1 Breal group derived from the C foreign to the animal. Analogues of human PSM, human Her2 and c human/murine FGPBb comprising a substantial part of all known and c predicted CTL and B-cell epitopes of the respective PA and including at conference or from the wild type human PSM (AAM92619), which appears on pages 184-187 of the specification

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Gaps

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Indels

Length 750;

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human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 Erst T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast concer when the PA is human PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Prostate specific membrane antigen; immunogenized construct; mutant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mutant human prostate specific membrane antigen construct, hPSM1.2.
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prostate cancer; cell-associated peptide antigen; foreign epitope.
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                                                                                                                                                                                                                                                                                  100.0%; Score 112; DB 3; 100.0%; Pred. No. 4.6e-10;
                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87. .107
/label= P30
/note= "foreign epitope"
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/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                 210 FNNFTVSFWLRVPKVSASHLE 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY92634 standard; protein; 750 AA.
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Best Local Similarity 100...
Local 21; Conservative
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                                                                                                                                                                                                                    of the specification
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                                                                                                                                                                                                                                                    Sequence 750 AA;
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Synthetic.
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20-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gautam A,
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human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epicopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Har2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dalum I;
                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Prostate specific membrane antigen; immunogenized construct; mutant;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Mutant human prostate specific membrane antigen construct, hPSM10.3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vaccination; cytotoxic T-lymphocyte immunity; breast cancer;
prostate cancer; cell-associated peptide antigen; foreign epitope.
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                                                                                                                                                                    Length 750;
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                                                                                                                                                                                                  0; Indels
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                                                                                                                                                                  Score 112; DB 3;
Pred. No. 4.6e-10;
Mismatches 0;
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/label= P30
/note= "foreign epitope"
674. .688
/label= P2
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/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          location/Qualifiers
                                                                                                                                                                                                                                                                                                                                              AAY92646 standard; protein; 750 AA.
                                                                                                                                                                                                                                                    FINETVSFWLRVPKVSASHLE 693
                                                                                                                                                                                                                                 1 FNNFTVSFWLRVPKVSASHLE 21
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1 Similarity 100.0%; P:
21; Conservative 0;
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Birk P, Karlsson G;
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                                                                                                                                                                                    Local Similarity
                                                                                                                                     Sequence 750 AA;
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Gautam A, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                673
                                                                                                                                                                                                                                                                                                                                                                              AAY92646;
                                                                                                                                                                     Query Match
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Dalum I;

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PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
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                                                                                                                                                                                                                                                                                                                                                         Prostate specific membrane antigen; immunogenized construct; mutant;
                                                                                                                                                                                                                                                                                                                                        Mutant human prostate specific membrane antigen construct, hPSM8.1.
                                                                                                                                                                                                                                                                                                                                                                  vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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                                                                                                                                                                                                  100.0%; Score 112; DB 3; Length 750; 100.0%; Pred. No. 4.6e-10; ive 0; Mismatches 0; Indels 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                         21. .41
/label= P30
/note="foreign epitope"
606. .620
/label= P2
/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                 location/Qualifiers
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                                                                                                                                                                                                                                                                                         AAY92629 standard; protein; 750 AA.
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98US-0105011P.
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                                                                                                                                                                                                                   Conservative
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                                                                                                                                                                   of the specification
                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                  Sequence 750 AA;
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20-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
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WPI; 2000-349917/30.

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The immunogenic analogues of PSM can be used in the claimed method as an autigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autigon contain the claimed method as an entergen to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide thuman prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or tiproblast growth factor 8b (PGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) call-associated PA; and (2) at least 1 B-cell group derived from the PA and/or at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and predicted CTL and B-cell epitopes of the respective PA and including at least to the animal Theory of the respective PA and including at least to the animal Theory of the respective PA and including at least to treat prostate, prostate/breast or breast cancer when the PA is human correct prostate, prostate/breast or breast cancer when the PA is human from the wild type human PSM (AAY92619), which appears on pages 184-187 cofficention
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                 Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                            immunogenized human prostate specific membrane
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100.0%; Pred. No. 4.6e-10;
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/label= P2
/note= "foreign epitope"
301. .321
/label= P30
/note= "foreign epitope"
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                                                                      Example 1; Page; 220pp; English.
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98US-0105011P.
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                                                                                                            are mutant
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20-OCT-1998;
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Peptide
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Dalum I;

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AAY92642 standard; protein; 750 AA.
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                                                                                                                                                                                                                                                                                                               Example 1; Page; 220pp; English.
                                                                                                             Birk P, Karlsson G;
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                             (MEBI-) M & E BIOTECH AS.
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                                                                                     Mouritsen S,
                                                                                                                                                                  WPI; 2000-349917/30.
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 750 AA;
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                                                                                  Steinaa L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                  Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY92642;
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g
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize and season in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are content of the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8D (FGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the simula system of: (1) at least 1 CTL (cytocoxic T-1ymphocyte) continuing immune system of: (1) at least 1 B-cell group derived from the CC group derived from the PA and/or at least 1 B-cell group which is coll-associated PA; and (2) at least 1 Eirst T helper cell group which is contained cTL and B-cell epitopes of the respective PA and including at contained processing a substantial part of all known and channal. Analogues of the respective PA and including at contained processing T helper epitope are also claimed. The method is used to the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                          Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 112; DB 3; Length 750; 100.0%; Pred. No. 4.6e-10; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                         Leach D,
                                                                                                                                                                                         Haaning J,
                                                                                                                                                                                         Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY92644 standard; protein; 750 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; Page; 220pp; English.
                                                                                                                                                                                      Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
99WO-DK000525.
                                                     98DK-00001261.
                                                                              98US-0105011P.
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                                                                                                                                 (MEBI-) M & E BIOTECH AS.
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Synthetic.
  05-OCT-1999;
                                                     05-OCT-1998;
                                                                              20-OCT-1998;
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Best Local S
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                                                                                                                                                                                                             Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                              Haaning J, Leach D, Dalum I;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Prostate specific membrane antigen; immunogenized construct; mutant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mutant human prostate specific membrane antigen construct, hPSM0.1.
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prostate cancer; cell-associated peptide antigen; foreign epitope.
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100.0%; Pred. No. 4.6e-10;
ive 0; Mismatches 0;
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/label= P30
/note= "foreign epitope"
                                                                           Nielsen KG,
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Gaps

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210. .230 / /label= P30 /note= "foreign epitope"

448. .462

Peptide

Location/Qualifiers

Peptide

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(MEBI-) M & E BIOTECH AS.
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Matches 21; Conservative
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                                                                                       WO200020027-A2
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Location/Qualifiers WPI; 2000-349917/30. Sequence 756 AA; WO200020027-A2 05-OCT-1999; 05-OCT-1998; 20-0CT-1998; 10-AUG-2000 13-APR-2000. Synthetic. AAY92660; Query Match Key Peptide Best Loca Matches RESULT 197 AAY9266(g ò AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or human prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 80 FG788b). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 E-cell group derived from the PA and/or at least 1 E-cell group derived from the cell-associated PA; and (2) at least 1 E-cell group which is foreign to the animal. Analogues of human PSM, human Herz and predicted CTL and B-cell epitopes of human PSM, human Herz and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human pSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the walld type human PSM (AAY92619), which appears on pages 184-187 of the specification ö Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer. Dalum I; Gaps Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope. Mutant murine prostate specific membrane antigen construct, mPSMX. ö 100.0%; Score 112; DB 3; Length 750; 100.0%; Pred. No. 4.6e-10; ive 0; Mismatches 0; Indels (Leach D, Haaning J, /label= P2 /note= "foreign epitope" Nielsen KG, AAY92659 standard; protein; 756 AA. 260 FINFTVSFWLRVPKVSASHLE 280 1 FNNFTVSFWLRVPKVSASHLE 21 Steinaa L, Mouritsen S, Nielse Gautam A, Birk P, Karlsson G; Example 1; Page; 220pp; English 99WO-DK000525. 98DK-00001261 98US-0105011P (first entry)

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antigen (PSM) constructs, which contains a foreign epitope, P30. The analogues can be used to study whether autotolerance to mouse PSM can be used to study whether autotolerance to mouse PSM can be be used to study whether autotolerance to mouse PSM can be used in mice by immunisation and/or DNA vaccination against murine PSM using murine PSM analogues I Immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. The method is used for inducing immune responses against weakly immunogenic cell-cassociated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human PSM, heregulin 2 (Her2) and/or fibroblast growth factors B6 (FGPSB). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animal immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA is and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGPBb comprising a substantial part of all known and predicted CTL and B-cell comprising a substantial part of all known and predicted CTL and B-cell comprising a substantial PM and including at least one foreign T helper cell group derived from the PR state of prostate, presented the method is used to treat prostate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY92659-62 are mutant immunogenized murine prostate specific membrane antigen (PSM) constructs, which contain a foreign epitope, P30. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Her2, respectively. Note: This sequence was constructed from the wild type murine PSM (AAY92623), which appears on pages 204-206 of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dalum 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Haaning J, Leach D,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nielsen KG,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
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255. .275
/label= P30
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Mus musculus,

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AAY92659-62 are mutant immunogenized murine prostate specific membrane antigen (PSM) constructs, which contain a foreign epitope, P30. The analogues can be used to study whether autocolerance to mouse PSM can be used to study whether autocolerance to mouse PSM can be broken in mice by immuniation and/or DNA vaccination against murine PSM using murine PSM analogues. Immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (Self-protein)), e.g. human PSM, heregulin 2 (Harz) and/or fibroblast crystem of: (1) at least 1 Producing cells (APCs) of the animals immune the PA and/or at least 1 B-cell group derived from the cell-associated PA crystem of: (1) at least 1 B-cell group derived from the cell-associated PA and (2) at least 1 B-cell group derived from the cell-associated PA comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper CC epitope are also claimed. The method is used to treat prostate, comprising a substantial part of all known and predicted CTL and B-cell epitopes are also claimed. The method is used to treat prostate, comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper CC epitope are also claimed. The method is used to treat prostate, the PA is human PSM, FGFBb and Herz, respectively. Note: This sequence was constructed from the wild constructed from the paint mentine PSM (AAY92621), which appears on pages 204-206 of the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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prostate cancer; cell-associated peptide antigen; foreign epitope.
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100.0%; Pred. No. 4.7e-10;
ive 0; Mismatches 0;
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689. .709
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                                                                                                                                                                                                                                                                                                                                                                                                          Mouritsen S, Niels
Birk P, Karlsson G;
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98US-0105011P.
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es 21, Conservative
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                                        musculus.
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                                                             Synthetic
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Matches
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The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a tractment selected from promoting or inhibiting survival of cells, promoting or preventing and reversing damage to cells; killing cells; promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular confiction and regulating nitric oxide release from cells. The invention is suseful in the manufacture of a medicament for treating a neuronal cell, for increellular infection, for interfering with intracellular cell, for incretting acception of cell-surface markers and for inhibiting secretion from cells. The invention is also useful for treating prion disease, Alzheimer disease and wide range of disorders including muscle spasms such as blophorospasm, torticols and the hypersecretion disorders such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion construct comprising Corpusation of cells and constructive pulmonary disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                        infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spasm; CODD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; Hc; binding domain; HN domain; DipT; Hc;
                    Apoptosis; therapy; inflammatory mediator; intracellular trafficking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 12; Page 114-117; 130pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (MICR-) MICROBIOLOGICAL RES AUTHORITY
                                                                                                                                                                                                                                                                                                                                                                                           21-MAY-2002; 2002WO-GB002384
                                                                                                                                                                                                                                                                                                                                                                                                                                      24-MAY-2001; 2001GB-00012687
                                                                                                                                                                        Corynebacterium diphtheriae.
                                                                                                                                                                                          Clostridium tetani.
Salmonella typhimurium.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Shone CC;
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domain (DipT-HW domain), Clostridium tetami tetamus neurotoxin binding domain (TeNT-Hc), thrombin linker peptide and Salmonella typhimurium SpiC protein. This sequence is used in the exemplification of the invention Sequence 810 AA;

100.0%; Score 112; DB 6; Length 810; 100.0%; Pred. No. Se-10; ive 0; Mismatches 0; Indels (1 FUNFTVSFWLRVPKVSASHLE 21 21; Conservative Matches ò

Best Local Similarity

Query Match

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Gaps

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440 FNNFTVSFWLRVPKVSASHLE 460 AAE35715 standard; protein; 810 AA AAE35715; RESULT 199 AAE35715

(first entry) 17-JUN-2003

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ADL90085;

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Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                                                    Apoptosis, therapy; inflammatory mediator; intracellular trafficking; infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spasm; COPD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; HC; binding domain; SpiC protein.
                         TeNT-Hc-DipT HN domain-factor Xa linker-SpiC protein fusion construct.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-MAY-2001; 2001GB-00012687
                                                                                                                                                                                                                                                                                                                                                            Corynebacterium diphtheriae,
                                                                                                                                                                                                                                                                                                                                                                                      Clostridium tetani.
Salmonella typhimurium.
Unidentified.
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NATURE OF COURSE
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The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a carget call. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, premoting and reversing damage to cells, killing cells, promoting or inhibiting the growth of cells apoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating intracellular cells, for intracellular infection, for interfering with intracellular cells, for intracellular infection, for interfering with intracellular cells, for interfering with intracellular cells, in the invention is also useful for inhibiting secretion from cells. The invention is also useful for cell-inding muscle spasms such as blephorospasm, torticolis and hypersecretion diseases. Alzheimer' disease and wide range of disorders including muscle spasms such as blephorospasm, torticolis and hypersecretion disorders such as blephorospasm, torticolis and observed comprising corpusbacterium diphtheriae diphtheria toxin translocation domain (DipT-HW domain), Clostridium tetani tetanus neurotoxin binding comprision of the invention. This sequence is used in the exemplification of the

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0
           DB 6; Length 810;
                                      Indels
100.0%; Score 112; DB 6; 1
100.0%; Pred. No. 5e-10;
Mismatches 0;
     Query Match
Best Local Similarity 100.
Matches 21; Conservative
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ADL90085 standard; protein; 875 AA. ADL90085 RESULT

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Generating an immune response to an antigen, useful for generating desired T cell responses comprises administering an immunoglobulin having one peptide epitope of the antigen attached to the immunoglobulin.
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                                                                                      Immune response; immunoglobulin; Ig; tetanus toxin.
                                                                                                                                                                                                                                                                                                                       Phillips B;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Fig 1J; 154pp; English.
                                                           Tetanus toxin protein, SEQ ID 25.
                                                                                                                                                                                                                                          20-SEP-2002; 2002US-0412219P.
14-MAR-2003; 2003WO-US007995.
                                                                                                                                                                                                             18-SEP-2003; 2003WO-US030188
                              (first entry)
                                                                                                                                                                                                                                                                                                                       Bot A, Wang L, Smith D,
                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-295415/27.
                                                                                                                                                                                                                                                                                        (ASTR-) ASTRAL INC.
                                                                                                                                                  WO2004027049-A2.
                              17-JUN-2004
                                                                                                                    Unidentified
                                                                                                                                                                               01-APR-2004
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Gaps °, Length 875; Indels . 0 100.0%; Score 112; DB 8; 100.0%; Pred. No. 5.5e-10; ive 0; Mismatches 0; 100.08; Query Match
Best Local Similarity 100.
Matches 21; Conservative Sequence 875 AA;

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507 FNNFTVSFWLRVPKVSASHLE 527 21 1 FUNFTVSFWLRVPKVSASHLE Š 셤

Modified clostridial heavy chain-superoxide dismutase conjugate #1. AAE07889 standard; protein; 882 AA. 01-NOV-2001 (first entry) AAE07889; RESULT 201 AAE07889

Neuronal cell; binding domain; translocation domain; stroke; epilepsy; tumour; infection; neurodegenerative disease; gene therapy; chimeric; superoxide dismutase; SOD; diphtheria neurotoxin; tetanus neurotoxin; TeNT.

Geobacillus stearothermophilus. Corynebacterium diphtheriae. Clostridium tetani. Synthetic Chimeric.

WO200158936-A2.

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The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (acrosy terminal half of heavy chain (H) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocation domain is not a HN domain of a clostridial coning and is not a fragment or derivative of a HN domain of a clostridial toxin. Polypeptides of the invention are cusful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for delivering therapeutic cubstances to neuronal cells. They are useful for delivering therapeutic cubstances to neuronal cells. They are useful for delivering therapeutic cubstances to neuronal cells. They are useful in gene therapy. The present sequence of m diffection. They are also useful in gene therapy. The present sequence is modified clostridial heavy chain-superoxide dismutase conjugate. This superoxide dismutase (MnSOD), MnSOD from Bacillus stearothermophilus, linker that can be cleaved by factor Xa, translocation domain from the configuration and a neuronal cell-specific binding domain from
                                                                                                                                                                                                                                                                                                                                         New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TeNT-Hc-DipT HN domain-factor Xa linker-YopT protein fusion construct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Apoptosis, therapy, inflammatory mediator; intracellular trafficking; infection, Prion disease, Alzheimer' disease; hypersecretion disorder; muscle spasm, CODD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; Hc; binding domain; targetted effector protien; YopT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 112; DB 4; Length 907; 100.0%; Pred. No. 5.7e-10; Live 0; Mismatches 0; Indels (
                                                                                                                                                                                      (MICR-) MICROBIOLOGICAL RES AUTHORITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAE35712 standard; protein; 999 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              537 FINFTVSFWLRVPKVSASHLE 557
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 9; Page 41; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                           Silman N;
                                                       04-DEC-2000; 2000WO-GB004644.
                                                                                                                               07-APR-2000; 2000GB-00008658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Corynebacterium diphtheriae.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tetanus neurotoxin (TeNT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21; Conservative
                                                                                                                                                                                                                                           Sutton JM,
                                                                                                                                                                                                                                                                                            WPI; 2001-514643/56.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clostridium tetani.
Yersinia pestis.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 907 AA;
                                                                                                      02-DEC-1999;
  16-AUG-2001
                                                                                                                                                                                                                                           Shone CC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE35712;
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (acarboxy terminal half of heavy chain (HC) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocates the therapeutic agent into the neuronal cell, where the translocation domain is not a HN domain of a clostridial neurotoxin and is not a fragment or derivative of a HN domain of a clostridial toxin. Polypeptides of the invention are cusful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for the invention are constituting neurodegenerative diseases, stroke, epilepsy, brain tumours and infection. They are also useful in gene therapy. The present sequence is modified clostridial heavy chain-euperoxide dismutase conjugate. This conjugate comprises bacterial Mn-superoxide dismutase (MnSOD), from Bacillus stearchtermophilus, linker that can be cleaved by thrombin, translocation domain from diphtherial neurotoxin and a neuronal cell-
                                                                                                                                                                                                                                                                                                                                      New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Neuronal cell; binding domain; translocation domain; stroke; epilepsy; tumour; infection; neurodegenerative disease; gene therapy; chimeric; superoxide dismutase; SOD; diphtheria neurotoxin; tetanus neurotoxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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100.0%; Pred. No. 5.5e-10;
tive 0; Mismatches 0;
                                                                                                                                                                                 (MICR-) MICROBIOLOGICAL RES AUTHORITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            512 FNNFTVSFWLRVPKVSASHLE 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 9; Page 39; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 FNNFTVSFWLRVPKVSASHLE 21
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Corynebacterium diphtheriae.
                                                    04-DEC-2000; 2000WO-GB004644.
                                                                                                      02-DEC-1999; 99GB-00028530.
07-APR-2000; 2000GB-00008658.
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                                                                                                                                                                                                                                        Sutton JM,
                                                                                                                                                                                                                                                                                          WPI; 2001-514643/56.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 882 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200158936-A2
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16-AUG-2001.
                                                                                                                                                                                                                                  Shone CC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
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Best Local S
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Matches

RESULT 202 AAE07891

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Gaps

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us-09-806-703a-14.rag

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(MICR-) MICROBIOLOGICAL RES AUTHORITY.
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AAE07902
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                                                                                                                                                                                                                                                                              The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, preventing and reversing damage to cells; killing cells; promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell; for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell-surface markers and for inhibiting secretion from cells. The invention is also useful for treating Prion disease, Alzheimer' disease and wide range of disorders increasing and including muscle spasses such as blephorospasm, toricolis and increased in the invention is also useful for increasing and including muscle spasses such as blephorospasm, toricolis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypersecretion disorders such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion construct comprising Corymbacterium diphtheriae diphtheria toxin translocation domain (DipT-HN domain), Clostridium teranni tetanus neurotoxin binding domain (TeNT-HC), factor Xa linker peptide and Yersinia pestis targetted effector protien YopT. This sequence is used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Neuronal cell; binding domain; translocation domain; stroke; epilepsy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tumour; infection; neurodegenerative disease; gene therapy; botulinum neurotoxin; tetanus neurotoxin; TeNT
                                                                                                                                                                                                                                                       Example 12; Page 106-110; 130pp; English.
                                                                                                             (MICR-) MICROBIOLOGICAL RES AUTHORITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAE07903 standard; protein; 1052 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 FUNFTVSFWLRVPKVSASHLE 21
                                                      21-MAY-2002; 2002WO-GB002384.
                                                                                  24-MAY-2001; 2001GB-00012687,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                         Shone CC;
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Clostridium tetani.
                                                                                                                                                                     WPI; 2003-167247/16.
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Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 999 AA;
 WO200296467-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the invention
                            05-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21;
                                                                                                                                           Sutton JM,
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The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (arboxy terminal half of heavy chain (HC) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocation domain is not a HN domain of a clostridial court and is not a fragment or derivative of a HN domain of a clostridial toxin. Polypeptides of the invention are useful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for teat disorders of the CS including neurodegenerative diseases, stroke, epilepsy, brain tumours and infection. They are also useful in gene therapy. The present sequence is C botulinum C2 enterotoxin translocation domain with tetanus
                                                                                                                                                                                                                                                                                                                                                           New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
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                                                                                                                                                              (MICR-) MICROBIOLOGICAL RES AUTHORITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; Page 50; 50pp; English.
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                                                          02-DEC-1999; 99GB-00028530.
07-APR-2000; 2000GB-00008658.
04-DEC-2000; 2000WO-GB004644.
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07-APR-2000; 2000GB-00008658.
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Bust Local Similarity 100...
Best Local Similarity 100...
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                                                                                                                                                                                                                                   Sutton JM,
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Clostridium tetani.
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WPI; 2003-167247/16.

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The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (carboxy terminal half of heavy chain (HC) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocation domain is not a HN domain of a clostridial neurotoxin and is not a fragment or derivative of a HN domain of a clostridial toxin. Polypeptides of the invention are useful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for teat disorders of the CNS including neurodegenerative diseases, stroke, epilepsy, brain tumours and infection. They are also useful in gene therapy. The present sequence is C. botulinum C2 enterotoxin translocation domain with tetanus in the exemplification of the
                                                                       New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 4;
100.0%; Pred. No. 7.2e-10;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             742 FNNFTVSFWLRVPKVSASHLE 762
                                                                                                                                   Example 2; Page 49; 50pp; English.
               Silman N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Salmonella typhimurium.
Unidentified.
             Sutton JM,
                                           WPI; 2001-514643/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1112 AA;
             ე
                                                                                                                                                                                                                                                                                                                                                                                            nvention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAE35709;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric
               Shone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
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FeNT-Hc-DipT HN domain-factor Xa linker-SigD protein fusion construct. AAE35709 standard; protein; 1212 AA. 17-JUN-2003 (first entry)

Apoptosis; therapy; inflammatory mediator; intracellular trafficking; infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spaem; COPD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; HC; binding domain.

Corynebacterium diphtheriae.

WO200296467-A2.

05-DEC-2002.

21-MAY-2002; 2002WO-GB002384

24-MAY-2001; 2001GB-00012687.

(MICR-) MICROBIOLOGICAL RES AUTHORITY.

Sutton JM, Shone CC;

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The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, can inflammatory mediator from cells, division of cells, spoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell, for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell-surface markers and for inhibiting secretion from cells. The invention is also useful for treating prion disease, Alzheimer' disease and wide range of disorders including muscle spasms such as blephorospasm, torticolis and including muscle spasms such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion comparing comprising Corynebacterium diphtheriae diphtheria toxin translocation domain (DipT-HN domain), Clostridium teani tetanus neurotoxin binding exemplification of the invention.
                                                                       Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                                                                                                                            Example 12; Page 92-96; 130pp; English
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Sequence 1212 AA;

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Gaps ; 0

7

Length 1112; Indels

Gapa ö Query Match 100.0%; Score 112; DB 6; Length 1212; Best Local Similarity 100.0%; Pred. No. 8e-10; Matches 21; Conservative 0; Mismatches 0; Indels 0;

842 FNNFTVSFWLRVPKVSASHLE ઠે 용

AAE35708 standard; protein; 1212 AA. AAE35708

(first entry) 17-JUN-2003 TeNT-Hc-DipT HN domain-thrombin linker-SigD protein fusion construct.

Apoptosis; therapy; inflammatory mediator; intracellular trafficking; infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spaem; COD9; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeMT; translocation domain; HN domain; DipT; HC; binding domain; invasion gene D protein; SigD protein.

Corynebacterium diphtheriae Clostridium tetani. Salmonella typhimurium.

Chimeric

05-DEC-2002,

21-MAY-2002; 2002WO-GB002384

24-MAY-2001; 2001GB-00012687

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21 1 FNNFTVSFWLRVPKVSASHLE

RESULT 207

AAE35708;

Unidentified

WO200296467-A2.

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Example 12; Page 87-92; 130pp; English
(MICR-) MICROBIOLOGICAL RES AUTHORITY.
                                                                                                                                                                                                                                                                                          AAB61169 standard; protein; 1315 AA
                                                                                                                                                                                                                                                          842 FINFTVSFWLRVPKVSASHLE 862
                                                                                                                                                                                                                                                 1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                23-JUN-2000; 2000WO-GB002428
                                                                                                                                                                                                                                                                                                                                                                                                             99GB-00014861
                                                                                                                                                                                                                                                                                                                                                                                                                        (UNLO ) IMPERIAL COLLEGE SCI
                                                                                                                                                                                                                                                                                                                                                 TeNT fragment C; infection.
                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sinha K;
                                                                                                                                                                                                                                                                                                                              Clostridium tetani TeNT
            Shone CC;
                        WPI; 2003-167247/16.
                                                                                                                                                                                                                              Local Similarity
les 21; Conserv
                                                                                                                                                                                                                                                                                                                                                            Clostridium tetani.
                                                                                                                                                                                                              Sequence 1212 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Fairweather NF,
                                                                                                                                                                                                                                                                                                                                                                        WO200100839-A1.
                                                                                                                                                                                                                                                                                                                                                                                                             25-JUN-1999;
                                                                                                                                                                                                                                                                                                                   02-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                     04-JAN-2001
            Sutton JM,
                                                                                                                                                                                                                                                                                                      AAB61169;
                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                              RESULT 208
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The present sequence is given in a specification relating to a novel polypeptide comprising tetanus toxin (TeNT) fragment C or its immunogenic fragment. Containing a mutation in a loop region. The mutation results in a reduction in the binding of TeNT fragment C or its immunogenic fragment to gangliosides and primary motoneurones, and/or a reduction in the ability of TeNT fragment C or its immunogenic fragment to undergo retrograde transport. The polypeptide is useful for treating, preventing and reducing the susceptibility to Clostridium tetani infection in a min all and also for producing antibodies which recognise groups within TeNT polypeptides. Antibody produced against the polypeptide is also useful for treating Clostridium tetani infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin.
                        New polypeptide, useful for treating infections of Clostridium tetani, comprises tetanus toxin fragment with a mutation in a loop region,.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes a single chain polypeptide comprising clostridial neurotoxin light and heavy chains. The single chain polypeptide comprises 2 domains: the first domain is a clostridial neurotoxin light chain, or its fragment or variant, which is capable cleaving one or more vesicle or plasma membrane associated proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single chain polypeptide; clostridial neurotoxin light chain; clostridial neurotoxin heavy chain; Clostridium; neurotoxin; exocy; antibacterial; vaccine; toxin assay; clostridial toxin; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Marks P, Sutton MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridial neurotoxin amino acid sequence SEQ ID NO:141.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ch 100.0%; Score 112; DB 4; 1 Similarity 100.0%; Pred. No. 8.7e-10; 21; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID NO 141; 588pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADL90423 standard; protein; 1315 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chaddock J,
                                                                                                        Disclosure; Page 39; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         947 FINFTVSFWLRVPKVSASHLE 967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HEAL-) HEALTH PROTECTION AGENCY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-SEP-2003; 2003WO-GB003824,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-SEP-2002; 2002US-00241596.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Foster KA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
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N-PSDB; ADL90422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   botulinum; tetanus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1315 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO2004024909-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shone CC,
Wayne J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADL,90423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                           The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, preventing and reversing damage to cells, killing cells, promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular correction and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell, for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell-surface markers and for treating prion disease, Alzheimer' disease and wide range of disorders including muscle spasms such as blephorospasm, torticols and hypersecretion disorders such as chronic obstructive pulmonary disease (CC byp. bronchitis and asthma. The present sequence is a fusion construct comprising Corynebacterium diphtheria ediphtheria toxin translocation domain (JippT-HM domain), Clostridium tetani tetanus neurotoxin binding domain (TeNT-HC), thrombin linker peptide and Salmonella typhimurium truncated invasion gene D protein, SigD. This sequence is used in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                      Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
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exocytosis;

of

WPI; 2001-123014/13.

Stancombe P;

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Gaps

; 0

Indels

Length 1315;

c heavy chain H-N portion, or its fragment or variant, which is capable of translocating the polypeptide into a cell and/or increasing the solubility of the polypeptide compared to the solubility of the first domain on its own. The second domain lacks a functional C-terminal part of a clostridial neurotoxin heavy chain, designated H-C, which renders the polypeptide incapable of binding to cell surface receptors that are the natural cell surface receptors to which native clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors to which native clostridial neurotoxin companies. The single chain polypeptide described above. The single chain polypeptide described above. The single chain polypeptides can be used as positive controls for toxin assays, as reagent components for the synthesis of therapeutic molecules, or for developing vaccines against clostridial toxin. The polypeptides are also useful as non-toxic standards for the assessment and development of in vitro assays for detection of functional botulinum or tetanus neurotoxins in foodstuffs or environmental samples. The present sequence is used in the exemplification of the present invention. essential to exocytosis; the second domain is a clostridial neurotoxin 88888888888888888888888888888888

Sequence 1315 AA;

Gaps ö 100.0%; Score 112; DB 8; Length 1315; 100.0%; Pred. No. 8.7e-10; 0; Indels Mismatches · 0 21; Conservative Local Similarity Query Match Best Loc Matches

ò g RESULT 210 AAB85697

AAB85697 standard; protein; 1807 AA.

AAB85697;

29-OCT-2001 (first entry)

Recombinant protein ViVaclp

Multivalent protein; immune response; Plasmodium vivax; parasite; protozoacide; vaccine; malaria; recombinant; ViVacl.

Plasmodium vivax. Synthetic.

WO200155181-A2.

02-AUG-2001

29-JAN-2001; 2001WO-US002937.

31-JAN-2000; 2000US-0179213P.

(USSH) US DEPT HEALTH & HUMAN SERVICES.

Lal AA, Xiao L, Zhou Z;

WPI; 2001-514557/56. N-PSDB; AAH47058.

New recombinant multivalent protein comprising antigenic determinants derived from more than one stage in a life cycle of Plasmodium vivax, useful as a vaccine for treating, preventing and reducing malarial infection.

Claim 5; Page 39-45; 59pp; English.

The invention relates to recombinant multivalent proteins (I) that stimulate an immune response to Plasmodium vivax. (I) comprises antigenic determinants, fragments or conservative substitutions, derived from more than one stage in a life cycle of a Plasmodium vivax parasite. (I) is useful as a vaccine for stimulating an immune response, specifically a

by Plasmodium parasites, such as P. vivax. (I) is especially useful in the treatment, prevention and reduction of malarial infection, as research or diagnostic reagents for the detection of Plasmodium species in a biological sample, and for conferring immunity against multiple stages of the malarial parasite. The antibodies produced are useful for the detection or measurement of antigenic epitopes derived from one or more stages in a life cycle of a parasite, particularly P. vivax. The vaccine comprising the recombinant proteins, is cost-effective, health-promoting intervention for controlling, preventing or treating the incidence of malaria. The present sequence represents the amino acid sequence of the recombinant protein ViVaclp, a multivalent and multistage sed resistance to infecti is especially useful in vaccine against P. vivax

Sequence 1807 AA;

Gaps ö Length 1807; Indels 100.0%; Score 112; DB 4; 100.0%; Pred. No. 1.3e-09; iive 0; Mismatches 0; ; ; Conservative Query Match Best Local Similarity

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RESULT 211 AAB85698

AAB85698 standard; protein; 2028 AA.

AAB85698;

(first entry) 29-OCT-2001 Recombinant protein ViVac2p.

Multivalent protein; immune response; Plasmodium vivax; parasite; protozoacide; vaccine; malaria; recombinant; ViVac2.

Synthetic. Plasmodium vivax.

WO200155181-A2.

02-AUG-2001.

29-JAN-2001; 2001WO-US002937.

31-JAN-2000; 2000US-0179213P.

(USSH) US DEPT HEALTH & HUMAN SERVICES.

Lal AA, Xiao L, Zhou Z;

WPI; 2001-514557/56. N-PSDB; AAH47055.

New recombinant multivalent protein comprising antigenic determinants derived from more than one stage in a life cycle of Plasmodium vivax, useful as a vaccine for treating, preventing and reducing malarial infection.

Claim 5; Page 48-55; 59pp; English.

The invention relates to recombinant multivalent proteins (1) that stimulate an immune response to Plasmodium vivax. (1) comprises antigenic determinants, fragments or conservative substitutions, derived from more than one stage in a life cycle of a Plasmodium vivax parasite. (1) is useful as a vaccine for stimulating an immune response, specifically a protective immune response that confers increased resistance to infection by Plasmodium parasites, such as P. vivax. (1) is especially useful in the treatment, prevention and reduction of malarial infection, as research or diagnostic reagents for the detection of Plasmodium species in a biological sample, and for conferring immunity against multiple

us-09-806-703a-14.rag

stages of the malarial parasite. The antibodies produced are useful for the detection or measurement of antigenic epitopes derived from one or more stages in a life cycle of a parasite, particularly P. vivax. The vaccine comprising the recombinant proteins, is cost-effective, health-promoting intervention for controlling, preventing or treating the health-incidence of malaria. The present sequence represents the recombinant protein. Vivac2Pp, a militarial and multistage vaccine against P. vivax 8888888888888

Sequence 2028 AA;

Query Match (100.0%; Score 112; DB 4; Length 2028; Best Local Similarity 100.0%; Pred. No. 1.4e-09; Matches 21; Conservative 0; Mismatches 0; Indels 0;

0;

0; Gaps

ð g Search completed: January 26, 2005, 07:08:42 Job time: 134.667 secs

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